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                  IFICDB, IFIPAT, and IFIUDB enhanced with new custom
                  IPC display formats
NEWS 15 MAR 31 CAS REGISTRY enhanced with additional experimental
NEWS 16 MAR 31
                  CA/CAplus and CASREACT patent number format for U.S.
                  applications updated
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chain nodes : 7 8 21 22 23 ring nodes :

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110 SEA SSS FUL L1

=> file caplus uspatful

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=> s 12 L3 262 L2

=> s 13 and (plant 1s growth)

0 L3 AND (PLANT 1S GROWTH)

=> s 13 and plant and growth 68 L3 AND PLANT AND GROWTH

=> d 15 50-68 ibib abs hitstr

L5 ANSWER 50 OF 68 USPATFULL on STN

ACCESSION NUMBER: 2002:344451 USPATFULL

TITLE: Fungicidal combinations comprising glyoxalic acid methyl ester-O-methyloxime derivatives

Zurfluh, Rene, Bulach, SWITZERLAND INVENTOR(S):

NUMBER KIND DATE PATENT INFORMATION: US 2002198181 A1 20021226 APPLICATION INFO.: US 2002-202125 A1 20020724 (10) RELATED APPLN. INFO.: Division of Ser. No. US 2002-59087, filed on 28 Jan 2002, GRANTED, Pat. No. US 6451855 Division of Ser. No. US 2000-728185, filed on 2 Dec 2000, GRANTED, Pat. No.

US 6395761 Continuation of Ser. No. WO 1999-EP3883. filed on 4 Jun 1999, UNKNOWN

NUMBER DATE PRIORITY INFORMATION: GB 1998-12331 19980608 GB 1999-3669 19990217 DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: BAYER CORPORATION, PATENT DEPARTMENT, 100 BAYER ROAD, PITTSBURGH, PA, 15205

NUMBER OF CLAIMS: 10
EXEMPLARY CLAIM: 1 LINE COUNT: 582

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

A method of combating phytopathogenic diseases on crop plants which comprises applying to the crop plants or the locus thereof being infested with said phytopathogenic disease an effective amount of a combination of

a) 2-[a{[(a-methyl-3-trifluoromethyl-benzyl)imino]-oxy}-o-tolyl]-glyoxalic acid methyl ester-O methyloxime (I)

in association with

 b) a broad variety of otherplant fungicides is particularly effective in combating or preventing diseases of crop plants. These combinations exhibit synergistic fungicidal activity.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 251578-90-2

(synergistic fungicide)

RN 251578-90-2 USPATFULL

CN Benzeneacetic acid,  $\alpha$ -(methoxyimino)-2-[[[1-[3-(trifluoromethyl)phenyl]ethylidene]amino]oxy]methyl]-, methyl ester, mixt. with 2-chloro-N-(4'-chloro[1,1'-biphenyl]-2-yl)-3-pyridinecarboxamide (9C1) (CA INDEX NAME)

CM

1

CRN 188425-85-6 CMF C18 H12 C12 N2 O

CM

CRN 139485-98-6 CMF C20 H19 F3 N2 O4

L5 ANSWER 51 OF 68 ACCESSION NUMBER:

USPATFULL on STN

2002:338006 USPATFULL

TITLE:
INVENTOR(S):

Fungicidal mixtures based on amide compounds and morpholine or piperidine derivatives Schelberger, Klaus, Gonnheim, GERMANY, FEDERAL REPUBLIC

Schelberger, Klaus, Gonnheim, GERMANY, FEDERAL REPUBLI OF

Scherer, Maria, Landau, GERMANY, FEDERAL REPUBLIC OF Eicken, Karl, Wachenheim, GERMANY, FEDERAL REPUBLIC OF Hampel, Manfred, Neustadt, GERMANY, FEDERAL REPUBLIC OF Ammermann, Eberhard, Heppenheim, GERMANY, FEDERAL REPUBLIC OF

Lorenz, Gisela, Neustadt, GERMANY, FEDERAL REPUBLIC OF

Strathmann, Siegfried, Limburgerhof, GERMANY, FEDERAL REPUBLIC OF

2000, GRANTED, Pat. No. US 6436934 A 371 of International Ser. No. WO 1998-EP8230, filed on 15 Dec 1998. UNKNOWN

DATE

1998, UNKNOWN

PRIORITY INFORMATION: DE 1997-19756382 19971218

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: KEIL & WEINKAUF, 1350 CONNECTICUT AVENUE, N.W.,

NUMBER

WASHINGTON, DC, 20036

NUMBER OF CLAIMS: 10 EXEMPLARY CLAIM: 1 LINE COUNT: 771

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Fungicidal mixtures comprise as active components

a) an amide compound of the formula I

A--CO--NR.sup.1R.sup.2 I

in which A, R.sup.1 and R.sup.2 are as defined in the description, and

- b) dimethomorph or flumetover, and/or
- c) a valinamide of the formula III ##STR1##

in which

R.sup.13 is C.sub.3-C.sub.4-alkyl and

R.sup.14 is naphthyl or phenyl, where the phenyl radical is substituted in the 4-position by a halogen atom, a C.sub.1-C.sub.4-alkyl or C.sub.1-C.sub.4-alkoxy group, and/or

- d) benalaxyl, ofurace, metalaxyl, furalaxyl or oxydixyl, and/or
- e) 1-(2-cyano-2-methoxyiminoacetyl)-3-ethylurea in a synergistically effective amount.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 227473-05-4

(synergistic fungicide)

N 227473-05-4 USPATFULL

CN Alanine, N-(2,6-dimethylphenyl)-N-(methoxyacetyl)-, methyl ester, mixt. with 2-chloro-N-(4'-chloro[1,1'-biphenyl]-2-yl)-3-pyridinecarboxamide (9CI) (CA INDEX NAME)

CM 1

CRN 188425-85-6

CMF C18 H12 C12 N2 O

CM 2

CRN 57837-19-1 CMF C15 H21 N O4

188425-85-6D, mixts. containing (synergistic fungicides)

RN 188425-85-6 USPATFULL

3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-biphenyl]-2-yl)- (CA CN INDEX NAME)

L5 ANSWER 52 OF 68 USPATFULL on STN ACCESSION NUMBER:

2002:317442 USPATFULL

TITLE: Fungicidal mixtures based on amide compounds and

pyridine derivatives

INVENTOR(S): Schelberger, Klaus, Gonnheim, GERMANY, FEDERAL REPUBLIC

Scherer, Maria, Landau, GERMANY, FEDERAL REPUBLIC OF Eicken, Karl, Wachenheim, GERMANY, FEDERAL REPUBLIC OF Hampel, Manfred, Neustadt, GERMANY, FEDERAL REPUBLIC OF Ammermann, Eberhard, Heppenheim, GERMANY, FEDERAL

REPUBLIC OF

Lorenz, Gisela, Neustadt, GERMANY, FEDERAL REPUBLIC OF Strathmann, Siegfried, Limburgerhof, GERMANY, FEDERAL REPUBLIC OF

PATENT ASSIGNEE(S): BASF Aktiengesellschaft, Ludwigshafen, GERMANY, FEDERAL

# REPUBLIC OF (non-U.S. corporation)

	NUMBER	KIND	DATE		
PATENT INFORMATION:	US 6489348	B1	20021203		
	US 2003004184	A1	20030102		
APPLICATION INFO.:	US 2001-960485		20010924	(9)	
RELATED APPLN. INFO.:	Division of Ser.	No. US	581444, no	ow patented,	Pat. No.
	US 6346538				

			NUMBER	DATE
PRIORITY	INFORMATION:	DE	1997-19756380	1997121:
DOCUMENT	TYPE:	Ut	ility	
FILE SEGN	MENT:	GR.	ANTED	

PRIMARY EXAMINER:

Robinson, Allen J. LEGAL REPRESENTATIVE: Keil & Weinkauf

NUMBER OF CLAIMS: 15 EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 0 Drawing Figure(s); 0 Drawing Page(s)

LINE COUNT:

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

Fungicidal mixtures comprise as active components

a) an amide compound of the formula I

885

A--CO--NR.sup.1R.sup.2 I

in which A, R.sup.1 and R.sup.2 are as defined in the description, and

b) compounds of the formula II, their N-oxide or one of their salts ##STR1##

where the substituents R.sup.12 to R.sup.18 are as defined in the description, and/or

c) compounds of the formula III ##STR2##

where the substituents X.sup.1 to X.sup.5 and R.sup.19 to R.sup.22 are as defined in the description,

in a synergistically effective amount.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 228099-30-7 228099-34-1 (synergistic fungicide)

228099-30-7 USPATFULL RN

3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-biphenyl]-2-yl)-, mixt. with 5,7-dichloro-4-(4-fluorophenoxy) quinoline (9CI) (CA INDEX NAME)

CM 1

CN

CRN 188425-85-6

CMF C18 H12 C12 N2 O

CM 2

CRN 124495-18-7 CMF C15 H8 C12 F N O

RN 228099-34-1 USPATFULL

CN 3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-biphenyl]-2-yl)-, mixt. with N-[(ethoxyamino)[2-fluoro-6-(trifluoromethyl)phenyl]methylene]-4-methoxybenzenecetamide (9CI) (CA INDEX NAME)

CM 1

CRN 188425-85-6 CMF C18 H12 C12 N2 O

CM :

CRN 180408-18-8 CMF C19 H18 F4 N2 O3

IT 188425-85-6D, mixts. containing

(synergistic fungicides) RN 188425-85-6 USPATFULL

CN 3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-biphenyl]-2-yl)- (CA INDEX NAME)

L5 ANSWER 53 OF 68 USPATFULL on STN

ACCESSION NUMBER:

2002:280662 USPATFULL

TITLE: INVENTOR(S): Fungicidal mixtures based on amide compounds

Eicken, Karl, Wachenheim, GERMANY, FEDERAL REPUBLIC OF Ammermann, Eberhard, Heppenheim, GERMANY, FEDERAL

REPUBLIC OF

Stierl, Reinhard, Mutterstadt, GERMANY, FEDERAL

REPUBLIC OF

Lorenz, Gisela, Hambach, GERMANY, FEDERAL REPUBLIC OF Strathmann, Siegfried, Limburgerhof, GERMANY, FEDERAL

REPUBLIC OF

Scherer, Maria, Landau, GERMANY, FEDERAL REPUBLIC OF Schelberger, Klaus, Gonnheim, GERMANY, FEDERAL REPUBLIC

Hampel, Manfred, Neustadt, GERMANY, FEDERAL REPUBLIC OF

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2002156108	A1	20021024	
	US 6515000	B2	20030204	
APPLICATION INFO.:	US 2001-12346	A1	20011212	(10)

NUMBER DATE PRIORITY INFORMATION: DE 2000-10062327 20001214

DOCUMENT TYPE: Utility FILE SEGMENT: APPLICATION

KEIL & WEINKAUF, 1350 CONNECTICUT AVENUE, N.W., LEGAL REPRESENTATIVE:

WASHINGTON, DC, 20036

NUMBER OF CLAIMS: EXEMPLARY CLAIM:

LINE COUNT: 357

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Fungicidal mixtures, comprising A) an amide compound of the formula I ##STR1##

in which

R.sup.1, R.sup.2 are identical or different and are halogen, nitro, cyano, C.sub.1-C.sub.8-alkyl, C.sub.2-C.sub.8-alkenyl, C.sub.2-C.sub.8-baloalkyl, C.sub.2-C.sub.8-haloalkyl, C.sub.2-C.sub.8-haloalkyl, C.sub.2-C.sub.8-haloalkynyl, C.sub.1-C.sub.8-haloalkoxy, C.sub.1-C.sub.8-haloalkylthio, C.sub.1-C.sub.8-haloalkylthio, C.sub.1-C.sub.8-haloalkylthio, C.sub.1-C.sub.8-alkylsulfonyl;

x is 1, 2, 3 or 4;

y is 1, 2, 3, 4 or 5; and

B) dinitrophenol derivatives of the formulae II.a and II.b ##STR2##

in a synergistically effective amount, methods for controlling harmful fungi using mixtures of the compounds I and II and the use of the compounds I and II for preparing such mixtures are described.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

CN

IT 435347-16-3

(synergistic fungicidal mixture)

N 435347-16-3 USPATFULL

2-Butenoic acid, 2(or 4)-isooctyl-4,6(or 2,6)-dinitrophenyl ester, mixt. with 2-chloro-N-(4'-chloro[1,1'-biphenyl]-2-yl)-3-pyridinecarboxamide (9CI) (CA INDEX NAME)

CM 1

CRN 188425-85-6 CMF C18 H12 C12 N2 O

CM 2

CRN 39300-45-3 CMF C18 H24 N2 O6 CCI IDS CDES \*

D1-NO2

D1- (C8H17)

L5 ANSWER 54 OF 68 USPATFULL on STN

ACCESSION NUMBER: 2002:228353 USPATFULL

TITLE: Fungicidal mixtures based on amide compounds

INVENTOR(S): Eicken, Karl, Wachenheim, GERMANY, FEDERAL REPUBLIC OF
Ammermann, Eberhard, Heppenheim, GERMANY, FEDERAL

REPUBLIC OF

Stierl, Reinhard, Mutterstadt, GERMANY, FEDERAL

REPUBLIC OF

Lorenz, Gisela, Hambach, GERMANY, FEDERAL REPUBLIC OF Strathmann, Siegfried, Limburgerhof, GERMANY, FEDERAL

REPUBLIC OF

Scherer, Maria, Landau, GERMANY, FEDERAL REPUBLIC OF Schelberger, Klaus, Gonnheim, GERMANY, FEDERAL REPUBLIC

OF

Hampel, Manfred, Neustadt, GERMANY, FEDERAL REPUBLIC OF

		NUMBER	KIND	DATE	
PATENT INFORMATION:	US	2002123515	A1	20020905	
	US	6503932	B2	20030107	
APPLICATION INFO.:	US	2001-12347	A1	20011212	(10)

NUMBER DATE

PRIORITY INFORMATION: DE 2000-10062326 20001214

DOCUMENT TYPE: Utility FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: KEIL & WEINKAUF, 1350 CONNECTICUT AVENUE, N.W.,

WASHINGTON, DC, 20036 NUMBER OF CLAIMS: 9

EXEMPLARY CLAIM: 1
LINE COUNT: 373

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

B Fungicidal mixtures, comprising

A) an amide compound of the formula I ##STR1##

in which

R.sup.l, R.sup.2 are identical or different and are halogen, nitro, cyano, C.sub.1-C.sub.8-alkyl, C.sub.2-C.sub.8-alkenyl, C.sub.2-C.sub.8-alkenyl, C.sub.2-C.sub.8-haloalkyl, C.sub.2-C.sub.8-haloalkyl, C.sub.2-C.sub.8-haloalkynyl, C.sub.1-C.sub.8-alkoxy, C.sub.1-C.sub.8-haloalkoxy, C.sub.1-C.sub.8-haloalkylthio,

C.sub.1-C.sub.8-alkylsulfinyl or C.sub.1-C.sub.8-alkylsulfonyl;

x is 1, 2, 3 or 4;

y is 1, 2, 3, 4 or 5; and

B) the amino compound of the formula II ##STR2##

in a synergistically effective amount, methods for controlling harmful fungi using mixtures of the compounds I and II and the use of the compounds I and II for preparing such mixtures are described.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 435347-14-1

(synergistic fungicidal mixture)

RN 435347-14-1 USPATFULL

CM 3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-biphenyl]-2-yl)-, mixt. with 8-(1,1-dimethylethyl)-N-ethyl-N-propyl-1,4-dioxaspiro[4.5]decane-2methanamine (9CI) (CA INDEX NAME)

CM 1

CRN 188425-85-6

CMF C18 H12 C12 N2 O

CM

CRN 118134-30-8 CMF C18 H35 N O2

$$t-Bu$$
 $O$ 
 $CH_2-N-Pr-n$ 

ANSWER 55 OF 68 USPATFULL on STN ACCESSION NUMBER: TITLE:

INVENTOR(S):

2002:209523 USPATFULL

Fungicide mixtures based on amide compounds and morpholine or piperidine derivatives

Schelberger, Klaus, Gonnheim, GERMANY, FEDERAL REPUBLIC OF

Scherer, Maria, Landau, GERMANY, FEDERAL REPUBLIC OF Eicken, Karl, Wachenheim, GERMANY, FEDERAL REPUBLIC OF Hampel, Manfred, Neustadt, GERMANY, FEDERAL REPUBLIC OF Ammermann, Eberhard, Heppenheim, GERMANY, FEDERAL REPUBLIC OF

Lorenz, Gisela, Neustadt, GERMANY, FEDERAL REPUBLIC OF

Strathmann, Siegfreid, Limburgerhof, GERMANY, FEDERAL

REPUBLIC OF

PATENT ASSIGNEE(S): BASF Aktiengesellschaft, Ludwigshafen, GERMANY, FEDERAL

REPUBLIC OF (non-U.S. corporation)

NUMBER KIND DATE

PATENT INFORMATION: US 6436934 B1 20020820 W0 9931976 19990701 APPLICATION INFO:: US 2000-581834 20000619 (9) W0 1998-EP8230 19981215

WO 1998-EP8230 19981215 20000619 PCT 371 date

NUMBER DATE

PRIORITY INFORMATION: DE 1997-19756382 19971218

19

DOCUMENT TYPE: Utility FILE SEGMENT: GRANTED

PRIMARY EXAMINER: Robinson, Allen J. LEGAL REPRESENTATIVE: Keil & Weinkauf

NUMBER OF CLAIMS: EXEMPLARY CLAIM:

NUMBER OF DRAWINGS: 0 Drawing Figure(s); 0 Drawing Page(s)

LINE COUNT: 745

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Fungicidal mixtures comprise as active components

a) an amide compound of the formula I

A--CO--NR.sup.1R.sup.2 I

in which A, R.sup.1 and R.sup.2 are as defined in the description, and

- b) dimethomorph or flumetover, and/or
- c) a valinamide of the formula III ##STR1##

in which

R.sup.13 is C.sub.3-C.sub.4-alkyl and

R.sup.14 is naphthyl or phenyl, where the phenyl radical is substituted in the 4-position by a halogen atom, a C.sub.1-C.sub.4-alkyl or C.sub.1-C.sub.4-alkoxy group, and/or

- d) benalaxyl, ofurace, metalaxyl, furalaxyl or oxydixyl, and/or
- e) 1-(2-cyano-2-methoxyiminoacetyl)-3-ethylurea in a synergistically effective amount.
- CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 227473-05-4

- (synergistic fungicide)
- RN 227473-05-4 USPATFULL
- CN Alanine, N-(2,6-dimethylphenyl)-N-(methoxyacetyl)-, methyl ester, mixt. with 2-chloro-N-(4'-chloro[1,1'-biphenyl]-2-yl)-3-pyridinecarboxamide (9CI) (CA INDEX NAME)

CM 1

CRN 188425-85-6

CMF C18 H12 C12 N2 O

CM 2

CRN 57837-19-1 CMF C15 H21 N O4

IT 188425-85-6D, mixts. containing

(synergistic fungicides)

RN 188425-85-6 USPATFULL

CN 3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-bipheny1]-2-y1)- (CA INDEX NAME)

L5 ANSWER 56 OF 68 USPATFULL on STN

ACCESSION NUMBER:

TITLE:

2002:179192 USPATFULL

NUMBER

Fungicidal combinations comprising glyoxalic acid methyl ester-O-methyloxime derivatives

KIND DATE

Zurfluh, Rene, Bulach, SWITZERLAND

INVENTOR(S): Leadbitter, Neil, Oberwil, SWITZERLAND

PATENT INFORMATION:	US 2002094982	A1	20020718
	US 6451855	B2	20020917
APPLICATION INFO.:	US 2002-59087	A1	20020128 (10)
RELATED APPLN. INFO.:	Division of Ser.	No. US	2000-728185, filed on 2 Dec
	2000, PENDING Co.	nt inmati	ion of Ser. No. WO 1999-EP3883.

# filed on 4 Jun 1999, UNKNOWN

 NUMBER
 DATE

 PRIORITY INFORMATION:
 GB 1998-12331
 19980608

 GB 1999-3669
 19990217

 DOCUMENT TYPE:
 Utility

FILE SEGMENT: Utility
FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: BAYER CORPORATION, PATENT DEPARTMENT, 100 BAYER ROAD,

PITTSBURGH, PA, 15205

NUMBER OF CLAIMS: 10 EXEMPLARY CLAIM: 1

LINE COUNT: 576

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A method of combating phytopathogenic diseases on crop plants

which comprises applying to the crop plants or the locus thereof being infested with said phytopathogenic disease an effective amount of a combination of

a) 2-[a-{[(a-methyl-3-trifluoromethyl-benzyl)imino]-oxy}-o-tolyl]-glyoxalic acid methyl ester-0 methyloxime (I)

in association with

 b) a broad variety of otherplant fungicides is particularly effective in combating or preventing diseases of crop plants. These combinations exhibit synergistic fungicidal activity.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 251578-90-2

(synergistic fungicide)

RN 251578-90-2 USPATFULL

CN Benzeneacetic acid, α-(methoxyimino)-2-[[[[1-[3-

(trifluoromethyl)phenyl]ethylidene]amino]oxy]methyl]-, methyl ester, mixt. with 2-chloro-N-(4"-chloro[1,1"-biphenyl]-2-yl)-3-pyridinecarboxamide (9CI) (CA INDEX NAME)

CM 1

CRN 188425-85-6 CMF C18 H12 C12 N2 O

CM 2

CRN 139485-98-6 CMF C20 H19 F3 N2 O4

L5 ANSWER 57 OF 68 USPATFULL on STN

ACCESSION NUMBER: 2002:152666 USPATFULL

TITLE: Fungicidal mixtures based on amide compounds and tetrachloroisophthalonitrile

INVENTOR(S): Schelberger, Klaus, Gonnheim, GERMANY, FEDERAL REPUBLIC

Scheiberger, Klaus, Gonnheim, GERMANY, FEDERAL REPUBLI

Scherer, Maria, Landau, GERMANY, FEDERAL REPUBLIC OF Eicken, Karl, Wachenheim, GERMANY, FEDERAL REPUBLIC OF Hampel, Manfred, Neustadt, GERMANY, FEDERAL REPUBLIC OF Ammermann, Eberhard, Heppenheim, GERMANY, FEDERAL

REPUBLIC OF

Lorenz, Gisela, Neustadt, GERMANY, FEDERAL REPUBLIC OF Strathmann, Siegfried, Limburgerhof, GERMANY, FEDERAL

REPUBLIC OF

PATENT ASSIGNEE(S): BASF Aktiengesellschaft, Ludwigshafen, GERMANY, FEDERAL REPUBLIC OF (non-U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 6410572	B1	20020625	
	WO 9931983		19990701	
APPLICATION INFO.:	US 2000-581795		20000619	(9)
	WO 1998-EP8226		19981215	

20000619 PCT 371 date DOCUMENT TYPE: Utility

FILE SEGMENT: GRANTED

PRIMARY EXAMINER: Robinson, Allen J. LEGAL REPRESENTATIVE: Keil & Weinkauf

NUMBER OF CLAIMS: 17

EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 0 Drawing Figure(s); 0 Drawing Page(s)

LINE COUNT: 658

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Fungicidal mixtures comprise as active components

a) an amide compound of the formula I

A--CO--NR.sup.1R.sup.2

in which

A is an aryl group or an aromatic or non-aromatic, 5- or 6-membered heterocycle which has from 1 to 3 hetero atoms which are selected from 0. N and S:

where the aryl group or the heterocycle may or may not have 1, 2 or 3 substituents which are selected, independently of one another, from alkyl, halogen, CHF.sub.2, CF.sub.3, alkoxy, haloalkoxy, alkylthio, alkylsulfinyl and alkylsulfonyl;

R.sup.1 is a hydrogen atom;

R.sup.2 is a phenyl or cycloalkyl group which may or may not have 1, 2 or 3 substituents which are selected, independently of one another, from alkyl, alkenyl, alkenyl, alkoxy, alkenyloxy, alkynyloxy, cycloalkyl, cycloalkyl, cycloalkyl, cycloalkyl, cycloalkyloxy, cycloalkyl, percent alighatic and cycloaliphatic radicals may be partially or fully halogenated and/or the cycloaliphatic radicals may be substituted by from 1 to 3 alkyl groups and where the phenyl group may have from 1 to 5 halogen atoms and/or from 1 to 3 substituents which are selected, independently of one another, from alkyl, haloalkyl, alkoxy, haloalkoxy, alkylthio and haloalkylthio, and where the amidic phenyl group may or may not be substituted by one or more alkyl groups and/or may have a hetero atom selected from O and S, and

b) tetrachloroisophthalonitrile II ##STR1##

in a synergistically effective amount.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 228101-74-4

(synergistic fungicide)

1 228101-74-4 USPATFULL

CN 3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-biphenyl]-2-yl)-, mixt. with 2,4,5,6-tetrachloro-1,3-benzenedicarbonitrile (9CI) (CA INDEX NAME)

CM 1

CRN 188425-85-6 CMF C18 H12 C12 N2 O

CM 2

CRN 1897-45-6 CMF C8 C14 N2

L5 ANSWER 58 OF 68 USPATFULL on STN ACCESSION NUMBER: 2002:144292 USPATFULL

TITLE: Fungicide mixtures based on amide compounds and

pyridine derivatives

Schelberger, Klaus, Gonnheim, GERMANY, FEDERAL REPUBLIC INVENTOR(S):

Scherer, Maria, Landau, GERMANY, FEDERAL REPUBLIC OF Eicken, Karl, Wachenheim, GERMANY, FEDERAL REPUBLIC OF Hampel, Manfred, Neustadt, GERMANY, FEDERAL REPUBLIC OF Ammermann, Eberhard, Heppenheim, GERMANY, FEDERAL

REPUBLIC OF

Lorenz, Gisela, Neustadt, GERMANY, FEDERAL REPUBLIC OF Strathmann, Siegfried, Limburgerhof, GERMANY, FEDERAL

REPUBLIC OF

PATENT ASSIGNEE(S): BASF Aktiengesellschaft, Ludwigshafen, GERMANY, FEDERAL

REPUBLIC OF (non-U.S. corporation)

NUMBER PATENT INFORMATION: US 6407126 B1 20020618 WO 9931951 19990701 APPLICATION INFO.: US 2000-581905 20000619 (9) WO 1998-EP8225 19981215

20000619 PCT 371 date

KIND DATE

NUMBER DATE

PRIORITY INFORMATION: DE 1997-19756378 19971218 DOCUMENT TYPE: Utility

FILE SEGMENT: GRANTED PRIMARY EXAMINER:

Aulath, Charandit S. LEGAL REPRESENTATIVE: Keil & Weinkauf NUMBER OF CLAIMS:

EXEMPLARY CLAIM:

NUMBER OF DRAWINGS: 0 Drawing Figure(s); 0 Drawing Page(s) LINE COUNT: 718

CAS INDEXING IS AVAILABLE FOR THIS PATENT. AB

Fungicidal mixtures comprise as active components

a) an amide compound of the formula I

A--CO--NR.sup.1R.sup.2 (I)

and at least one further ingredient selected from

b) a dithiocarbamate (II) selected from the group consisting of

manganese ethylenebis(dithiocarbamate) (zinc complex) (IIa),

manganese ethylenebis(dithiocarbamat) (IIb),

zinc ammoniate ethylenebis(dithiocarbamate) (IIc) and

zinc ethylenebis(dithiocarbamate) (IId)

c) a carbamate of the formula III

(CH.sub.3).sub.2N--CH.sub.2CH.sub.2CH.sub.2--NH--CO.sub.2--CH.sub.2CH.sub.2CH.sub.3 (III)

d) an N-acetonylbenzamide of the formula IV ##STR1##

or a salt or adduct thereof,

- e) an active compound of the formula V, ##STR2##
- f) an active compound of the formula VI, ##STR3##

and

g) an active compound of the formula VII, ##STR4##

where the substituents are as defined in the description, in a synergistically effective amount.

- CAS INDEXING IS AVAILABLE FOR THIS PATENT.
- IT 227757-29-1
- (synergistic fungicide)
- RN 227757-29-1 USPATFULL
- CN 3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-biphenyl]-2-yl)-, mixt. with 5-methyl-5-(4-phenoxyphenyl)-3-(phenylamino)-2,4-oxazolidinedione (9C1) (CA INDEX NAME)

CM 1

CRN 188425-85-6 CMF C18 H12 C12 N2 O

CM :

CRN 131807-57-3 CMF C22 H18 N2 O4

- IT 188425-85-6D, mixts. containing
  - (synergistic fungicides)
- RN 188425-85-6 USPATFULL

L5 ANSWER 59 OF 68 USPATFULL on STN

ACCESSION NUMBER: 2002:81491 USPATFULL

TITLE: Fungicide mixtures based on pyridine amides and

fenarimol

Schelberger, Klaus, Gonnheim, GERMANY, FEDERAL REPUBLIC INVENTOR(S):

Scherer, Maria, Landau, GERMANY, FEDERAL REPUBLIC OF Eicken, Karl, Wachenheim, GERMANY, FEDERAL REPUBLIC OF Hampel, Manfred, Neustadt, GERMANY, FEDERAL REPUBLIC OF

> Ammermann, Eberhard, Heppenheim, GERMANY, FEDERAL REPUBLIC OF

Lorenz, Gisela, Neustadt, GERMANY, FEDERAL REPUBLIC OF Strathmann, Siegfried, Limburgerhof, GERMANY, FEDERAL

REPUBLIC OF PATENT ASSIGNEE(S): BASF Aktiengesellschaft, Ludwigshafen, GERMANY, FEDERAL

REPUBLIC OF (non-U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 6372748	B1	20020416	
	WO 9931985		19990701	
APPLICATION INFO.:	US 2000-581426		20000613	(9)
	WO 1998-EP8228		19981215	
			20000613	PCT 371 date

NUMBER DATE

PRIORITY INFORMATION: DE 1997-19756387 19971218

DOCUMENT TYPE: Utility FILE SEGMENT: GRANTED

PRIMARY EXAMINER: Robinson, Allen J.

LEGAL REPRESENTATIVE: Keil & Weinkauf

NUMBER OF CLAIMS: 9

EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: O Drawing Figure(s); O Drawing Page(s) 613

LINE COUNT:

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Fungicidal mixtures comprise as active components

a) an amide compound of the formula I

A--CO--NR.sup.1R.sup.2 I

in which

A is an aryl group or an aromatic or non-aromatic, 5- or 6-membered heterocycle which has from 1 to 3 hetero atoms selected from O, N and S;

where the aryl group or the heterocycle may or may not have 1, 2 or 3 substituents which are selected, independently of one another, from

alkyl, halogen, CHF.sub.2, CF.sub.3, alkoxy, haloalkoxy, alkylthio, alkylsulfynyl and alkylsulfonyl;

R.sup.1 is a hydrogen atom;

R.sup.2 is a phenyl or cycloalkyl group which may or may not have 1, 2 or 3 substituents which are selected, independently of one another, from alkyl, alkenyl, alkenyl, alkoxy, alkenyloxy, alkynyloxy, cycloalkyl, cycloalkenyl, cycloalkyloxy, cycloalkenyloxy, phenyl and halogen, where the aliphatic and cycloaliphatic radicals may be partially or fully halogenated and/or the cycloaliphatic radicals may be substituted by from 1 to 3 alkyl groups and where the phenyl group may have from 1 to 5 halogen atoms and/or from 1 to 3 substituents which are selected, independently of one another, from alkyl, haloalkyl, alkoxy, haloalkoxy, alkylthio and haloalkylthio, and where the amidic phenyl group may or may not be substituted by one or more alkyl groups and/or may have a hetero atom selected from 0 and S, and

b) ( $\pm$ )-(2-chlorophenyl)(4-chlorophenyl)(pyrimidin-5-yl)-methanol#STR1##

in a synergistically effective amount.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 228098-42-8

(synergistic fungicide)

228098-42-8 USPATFULL

CN 3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-biphenyl]-2-yl)-, mixt. with  $\alpha$ -(2-chlorophenyl)- $\alpha$ -(4-chlorophenyl)-5- pyrimidinemethanol (9C1) (CA INDEX NAME)

CM 1

CRN 188425-85-6

CMF C18 H12 C12 N2 O

CM

CRN 60168-88-9 CMF C17 H12 C12 N2 O

L5 ANSWER 60 OF 68 USPATFULL on STN

ACCESSION NUMBER: 2002:70001 USPATFULL

TITLE: F

Fungicide mixtures based on pyridine carboxamides

INVENTOR(S): Schelberger, Klaus, Gonnheim, GERMANY, FEDERAL REPUBLIC

Scherer, Maria, Landau, GERMANY, FEDERAL REPUBLIC OF Eicken, Karl, Wachenheim, GERMANY, FEDERAL REPUBLIC OF Hampel, Manfred, Neustadt, GERMANY, FEDERAL REPUBLIC OF Ammermann, Eberhard, Heppenheim, GERMANY, FEDERAL REPUBLIC OF

Lorenz, Gisela, Neustadt, GERMANY, FEDERAL REPUBLIC OF Strathmann, Siegfried, Limburgerhof, GERMANY, FEDERAL

Strathmann, REPUBLIC OF

PATENT ASSIGNEE(S): BASF Aktiengesellschaft, Ludwigshafen, GERMANY, FEDERAL

REPUBLIC OF (non-U.S. corporation)

NUMBER KIND DATE PATENT INFORMATION: US 6365608 B1 20020402 WO 9931981 19990701 APPLICATION INFO.: US 2000-581833 20000619 (9) WO 1998-EP8231 19981215 20000619 PCT 371 date

NUMBER DATE

PRIORITY INFORMATION: DE 1997-19756379 19971218

DOCUMENT TYPE: Utility FILE SEGMENT: GRANTED

PRIMARY EXAMINER: Robinson, Allen J.

LEGAL REPRESENTATIVE: Keil & Weinkauf NUMBER OF CLAIMS: 16

EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 0 Drawing Figure(s); 0 Drawing Page(s)

LINE COUNT: 748
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Fungicidal mixtures comprise as active components

a) an amide compound of the formula I

A--CO--NR.sup.1R.sup.2 I

in which

A is an aryl group or an aromatic or non-aromatic, 5- or 6-membered heterocycle which has from 1 to 3 hetero atoms selected from 0, N and S;

where the aryl group or the heterocycle may or may not have 1, 2 or 3 substituents which are selected, independently of one another, from alkyl, halogen, CHF.sub.2, CF.sub.3, alkoxy, haloalkoxy, alkylthio.

alkylsulfynyl and alkylsulfonyl;

R.sup.1 is a hydrogen atom;

R.sup.2 is a phenyl or cycloalkyl group which may or may not have 1, 2 or 3 substituents which are selected, independently of one another, from alkyl, alkenyl, alkynyl, alkoxy, alkenyloxy, alkynyloxy, cycloalkyl, cycloalkenyl, cycloalkyloxy, cycloalkenyloxy, phenyl and halogen, where the aliphatic and cycloaliphatic radicals may be partially or fully halogenated and/or the cycloaliphatic radicals may be substituted by from 1 to 3 alkyl groups and where the phenyl group may have from 1 to 5 halogen atoms and/or from 1 to 3 substituents which are selected, independently of one another, from alkyl, haloalkyl, alkoxy, haloalkoxy, alkylthio and haloalkylthio, and where the amidic phenyl group may or may not be condensed with a saturated 5-membered ring which may or may not be substituted by one or more alkyl groups and/or may have a hetero atom selected from 0 and S, and

- b) fungicides from the group of the dicarboximides and/or
- c) pyrimidine derivatives of the formula III ##STR1##

in which R is methyl, propyn-1-vl or cyclopropyl, and/or

- d) fludioxinil or fenpiclonil and/or
- e) captan, captafol or folpet and/or
- f) fluazinam and/or
- g) dichlofluanid or tolylfluanid

in a synergistically effective amount.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 228113-48-2 228113-50-6 228113-52-8

228113-54-0 228113-56-2 (synergistic fungicide)

228113-48-2 USPATFULL

RN CN

3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-biphenyl]-2-yl)-, mixt. with 3a, 4, 7, 7a-tetrahydro-2-[(trichloromethyl)thio]-1H-isoindole-1, 3(2H)dione (9CI) (CA INDEX NAME)

CM 1

CRN 188425-85-6 CMF C18 H12 C12 N2 O

CRN 133-06-2 CMF C9 H8 C13 N O2 S

RN 228113-50-6 USPATFULL

3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-bipheny1]-2-y1)-, mixt. with 2-((trichloromethy1)thio]-1H-isoindole-1,3(2H)-dione (9CI) (CA INDEX NAME)

CM 1

CN

CRN 188425-85-6 CMF C18 H12 C12 N2 O

CM 2

CRN 133-07-3 CMF C9 H4 C13 N O2 S

RN 228113-52-8 USPATFULL

CN 3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-biphenyl]-2-yl)-, mixt. with 1,1-dichloro-N-((dimethylamino)sulfonyl]-1-floro-Nphenylmethanesulfenamide (9C1) (CA INDEX NAME)

CM 1

CRN 188425-85-6 CMF C18 H12 C12 N2 O

CM 2

CRN 1085-98-9 CMF C9 H11 C12 F N2 O2 S2

$$\begin{array}{c|c} O & \mathtt{Ph} \\ \parallel & \parallel \\ S - \mathtt{N} - \mathtt{S} - \mathtt{CC1}_2 - \mathtt{F} \\ \parallel & 0 \end{array}$$

RN 228113-54-0 USPATFULL
CN 3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-bipheny1]-2-y1)-, mixt.
 with 4-(2,2-difluoro-1,3-benzodioxol-4-y1)-lH-pyrrole-3-carbonitrile
 (9CI) (CA INDEX NAME)

CM 1

CRN 188425-85-6 CMF C18 H12 C12 N2 O

CM :

CRN 131341-86-1 CMF C12 H6 F2 N2 O2

228113-56-2 USPATFULL RN

CN 3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-bipheny1]-2-y1)-, mixt. with 3-chloro-N-[3-chloro-2,6-dinitro-4-(trifluoromethyl)phenyl]-5-(trifluoromethy1)-2-pyridinamine (9CI) (CA INDEX NAME)

CM - 1

CRN 188425-85-6 CMF C18 H12 C12 N2 O

CM

CRN 79622-59-6 CMF C13 H4 C12 F6 N4 O4

188425-85-6D, mixts. containing (synergistic fungicides)

RN 188425-85-6 USPATFULL

CN 3-Pvridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-biphenv1]-2-v1)- (CA INDEX NAME)

L5 ANSWER 61 OF 68 USPATFULL on STN ACCESSION NUMBER: TITLE: INVENTOR(S):

2002:39939 USPATFULL

Fungicidal mixtures based on amide compounds and azoles Schelberger, Klaus, Gonnheim, GERMANY, FEDERAL REPUBLIC OF

Scherer, Maria, Landau, GERMANY, FEDERAL REPUBLIC OF Eicken, Karl, Wachenheim, GERMANY, FEDERAL REPUBLIC OF Hampel, Manfred, Neustadt, GERMANY, FEDERAL REPUBLIC OF Ammermann, Eberhard, Heppenheim, GERMANY, FEDERAL

REPUBLIC OF

Lorenz, Gisela, Neustadt, GERMANY, FEDERAL REPUBLIC OF Strathmann, Siegfried, Limburgerhof, GERMANY, FEDERAL

REPUBLIC OF

PATENT ASSIGNEE(S): BASF Aktiengesellschaft, Ludwigshafen, GERMANY, FEDERAL REPUBLIC OF (non-U.S. corporation)

	NUMBER	KIND	DATE		
PATENT INFORMATION:	US 6350765	B1	20020226		
	WO 9931979		19990701		
APPLICATION INFO.:	US 2000-581796		20000619	(9)	
	WO 1998-EP8224		19981215		
			20000619	PCT 371	date
DOCUMENT TYPE:	Utility				
FILE SEGMENT:	GRANTED				
PRIMARY EXAMINER:	Robinson, Allen	J.			
LEGAL REPRESENTATIVE:	Keil & Weinkauf				
NUMBER OF CLAIMS:	16				
EXEMPLARY CLAIM:	1				
NUMBER OF DRAWINGS:	0 Drawing Figure	(s): 0 1	Drawing Pa	ae(s)	
LINE COUNT:	722			3	
CAS INDEXING IS AVAILAB		Γ.			

AB Fungicidal mixtures comprise as active components

a) an amide compound of the formula I

A--CO--NR.sup.1R.sup.2 I

in which

A is an aryl group or an aromatic or non-aromatic, 5- or 6-membered heterocycle which has from 1 to 3 hetero atoms which are selected from 0, N and S:

where the aryl group or the heterocycle may or may not have 1, 2 or 3 substituents which are selected, independently of one another, from alkyl, halogen, CHF.sub.2, CF.sub.3, alkoxy, haloalkoxy, alkylthio, alkylsulfinyl and alkylsulfonyl;

R.sup.1 is a hydrogen atom;

R.sup.2 is a phenyl or cycloalkyl group which may or may not have 1, 2 or 3 substituents which are selected, independently of one another, from alkyl, alkenyl, alkenyl, alkoxy, alkenyloxy, alkynyloxy, cycloalkyl, cycloalkenyl, cycloalkyl, alkenyl, cycloalkyloxy, cycloalkenyl, cycloalkyl, expendently and cycloaliphatic radicals may be partially or fully halogenated and/or the cycloaliphatic radicals may be substituted by from 1 to 3 alkyl groups and where the phenyl group may have from 1 to 5 halogen atoms and/or from 1 to 3 substituents which are selected, independently of one another, from alkyl, haloalkyl, alkoxy, haloalkoxy, alkylthio and haloalkylthio, and where the amidic phenyl group may or may not be substituted by one or more alkyl groups and/or may have a hetero atom selected from 0 and S, and

b) an azole derivative II

in a synergistically effective amount.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 228113-24-4 228113-27-7 228113-29-9 228113-32-4 228113-34-6 (synergistic fungicide)

RN 228113-24-4 USPATFULL

CN 3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-biphenyl]-2-y1)-, mixt. with rel-1-[[(2R,3S)-3-(2-chlorophenyl)-2-(4-fluorophenyl)-2-oxiranyl]methyl-1H-1,2,4-triazole (CA INDEX NAME)

CM :

CRN 188425-85-6 CMF C18 H12 C12 N2 O

CM :

CRN 133855-98-8 CMF C17 H13 C1 F N3 O

Relative stereochemistry.

RN 228113-27-7 USPATFULL

3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-biphenyl]-2-yl)-, mixt. with 3-(2,4-dichlorophenyl)-6-fluoro-2-(1H-1,2,4-triazol-1-yl)-4(3H)-quinazolinone (9CI) (CA INDEX NAME)

CM 1

CN

CRN 188425-85-6 CMF C18 H12 C12 N2 O

CM 2

CRN 136426-54-5 CMF C16 H8 C12 F N5 O

RN 228113-29-9 USPATFULL

3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-biphenyl]-2-yl)-, mixt. with 1-[[bis(4-fluorophenyl)methylsilyl]methyl]-1H-1,2,4-triazole (9C1) (CA INDEX NAME)

CM 1

CN

CRN 188425-85-6 CMF C18 H12 C12 N2 O

CM 2

CRN 85509-19-9 CMF C16 H15 F2 N3 Si

RN 228113-32-4 USPATFULL

CN 3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-biphenyl]-2-yl)-, mixt. with 1-[[2-(2,4-dichlorophenyl)-4-propyl-1,3-dioxolan-2-yl]methyl]-1H-1,2,4-triazole (9CI) (CA INDEX NAME)

CM 1

CRN 188425-85-6 CMF C18 H12 C12 N2 O

CM :

CRN 60207-90-1 CMF C15 H17 C12 N3 O2

RN 228113-34-6 USPATFULL

3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-biphenyl]-2-yl)-, mixt. with α-butyl-α-(4-chlorophenyl)-1H-1,2,4-triazole-1- propanenitrile (9C1) (CA INDEX NAME)

CM 1

CN

CRN 188425-85-6 CMF C18 H12 C12 N2 O

CM 2

CRN 88671-89-0 CMF C15 H17 C1 N4

188425-85-6D, mixts. with azoles

(synergistic fungicides)

188425-85-6 USPATFULL RN

3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-bipheny1]-2-y1)- (CA CN INDEX NAME)

L5 ANSWER 62 OF 68 USPATFULL on STN

ACCESSION NUMBER: 2002:29393 USPATFULL

TITLE: Fungicide mixtures based on amide compounds and

pyridine derivatives

INVENTOR(S): Schelberger, Klaus, Gonnheim, GERMANY, FEDERAL REPUBLIC

OF Scherer, Maria, Landau, GERMANY, FEDERAL REPUBLIC OF

Eicken, Karl, Wachenheim, GERMANY, FEDERAL REPUBLIC OF Hampel, Manfred, Neustadt, GERMANY, FEDERAL REPUBLIC OF

Ammermann, Eberhard, Heppenheim, GERMANY, FEDERAL REPUBLIC OF

Lorenz, Gisela, Neustadt, GERMANY, FEDERAL REPUBLIC OF Strathmann, Siegfried, Limburgerhof, GERMANY, FEDERAL REPUBLIC OF

PATENT ASSIGNEE(S): BASF Aktiengesellschaft, Ludwigshafen, GERMANY, FEDERAL

REPUBLIC OF (non-U.S. corporation)

	NUMBER	KIND DATE	
PATENT INFORMATION:	US 6346538 WO 9931980	B1 20020212 19990701	
APPLICATION INFO.:	US 2000-581444 WO 1998-EP8223	20000613 19981215 20000613	(9) PCT 371 date
	NUMBER	DATE	

DE 1997-19756380 19971218

PRIORITY INFORMATION: DE 1997-DOCUMENT TYPE: Utility

FILE SEGMENT: GRANTED

PRIMARY EXAMINER: Robinson, Allen J. LEGAL REPRESENTATIVE: Keil & Weinkauf

NUMBER OF CLAIMS: 19

EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 0 Drawing Figure(s); 0 Drawing Page(s)

LINE COUNT: 892

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Fungicidal mixtures comprise as active components

a) an amide compound of the formula I

A--CO--NR.sup.1R.sup.2 I

in which A, R.sup.1 and R.sup.2 are as defined in the description, and

b) compounds of the formula II, their N-oxide or one of their salts ##STR1##

where the substituents  $R.\sup.12$  to  $R.\sup.18$  are as defined in the description,

and/or

c) compounds of the formula III ##STR2##

where the substituents X.sup.1 to X.sup.5 and R.sup.19 to R.sup.22 are as defined in the description,

in a synergistically effective amount.

CAS INDEXING IS AVAILABLE FOR THIS PATENT. IT 228099-30-7 228099-34-1

(synergistic fungicide)

RN 228099-30-7 USPATFULL

XX 22003 - OSCARTON STATEMENT OF THE STATEMENT OF THE

CM 1

CRN 188425-85-6

CMF C18 H12 C12 N2 O

CM 2

CRN 124495-18-7 CMF C15 H8 C12 F N O

RN 228099-34-1 USPATFULL

CN 3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-biphenyl]-2-yl)-, mixt. with N-[(ethoxyamino)[2-fluoro-6-(trifluoromethyl)phenyl]methylene]-4-methoxybenzeneacetamide (9CI) (CA INDEX NAME)

CM 1

CRN 188425-85-6 CMF C18 H12 C12 N2 O

CM :

CRN 180408-18-8 CMF C19 H18 F4 N2 O3

IT 188425-85-6D, mixts. containing

(synergistic fungicides)

RN 188425-85-6 USPATFULL

CN 3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-biphenyl]-2-yl)- (CA INDEX NAME)

L5 ANSWER 63 OF 68 USPATFULL on STN

ACCESSION NUMBER:

ACCESSION NUMBER

TITLE: INVENTOR(S): 2001:112356 USPATFULL

Process and agents for controlling harmful fungi Wagner, Oliver, Ludwigshafen, Germany, Federal Republic

of

Eicken, Karl, Wachenheim, Germany, Federal Republic of Ammermann, Eberhard, Heppenheim, Germany, Federal

Republic of Lorenz, Gisela, Hambach, Germany, Federal Republic of Strathmann, Siegfried, Limburgerhof, Germany, Federal

Republic of

Kohle, Harald, Bobenheim, Germany, Federal Republic of Retzlaff, Gunter, Romerberg, Germany, Federal Republic

PATENT ASSIGNEE(S): BASF Aktiengesellschaft, Ludwigshafen, Germany, Federal Republic of (non-U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 6262091	B1	20010717	
	WO 9739628		19971030	
APPLICATION INFO.:	US 1998-171523		19981021	(9)
	WO 1997-EP2036		19970422	
			19981021	PCT 371 date
			19981021	PCT 102(e) date

			NUMBER	DATE
PRIORITY	INFORMATION:	DE	1996-19615977	19960422

DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Pak, John
LEGAL REPRESENTATIVE: Keil & Weinkauf
NUMBER OF CLAIMS: 19

NUMBER OF CLAIMS: 19 EXEMPLARY CLAIM: 1 LINE COUNT: 943

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Compositions for controlling harmful fungi, containing in a solid or liquid carrier

a) at least one p-hydroxyaniline derivative of the formula I ##STR1##

b) at least one amide compound of the formula II

A--CO--NR.sup.8 --R.sup.9 (II)

where the substituents have the meanings indicated in the description;

and methods of controlling harmful fungi using compositions of this type are described.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 188425-85-6D, mixts. with p-hydroxyaniline derivs.

(synergistic fungicidal mixts.)

RN 188425-85-6 USPATFULL

CN 3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-biphenyl]-2-yl)- (CA INDEX NAME)

L5 ANSWER 64 OF 68 USPATFULL on STN

ACCESSION NUMBER: 2001:1743 USPATFULL

TITLE: Harmful fungi control with an active substance

inhibiting respiration by inhibiting the cytochrome complex III, combined with an amide

INVENTOR(S): Bayer, Herbert, Mannheim, Germany, Federal Republic of Sauter, Hubert, Mannheim, Germany, Federal Republic of

Kohle, Harald, Bobenheim, Germany, Federal Republic of Retzlaff, Gunter, Romerberg, Germany, Federal Republic

of Ammermann, Eberhard, Heppenheim, Germany, Federal

Republic of

Lorenz, Gisela, Hambach, Germany, Federal Republic of Strathmann, Siegfried, Limburgerhof, Germany, Federal

Republic of

Eicken, Karl, Wachenheim, Germany, Federal Republic of PATENT ASSIGNEE(S): BASF Aktiengesellschaft, Ludwigshafen, Germany, Federal Republic of (non-U.S. corporation)

	NUMBER	KIND	DAIL	
PATENT INFORMATION:	US 6169056	B1	20010102	
	WO 9710716		19970327	
APPLICATION INFO.:	US 1998-43513		19980323	(9)
	WO 1996-EP4151		19960923	
			19980323	PCT 371 date
			19980323	PCT 102(e) date

NUMBER DATE

PRIORITY INFORMATION: DE 1995-19535366 19950922

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Dees, Jose' G.
ASSISTANT EXAMINER: Pryor, Alton
LEGAL REPRESENTATIVE: Keil & Weinkauf

LEGAL REPRESENTATIVE: Keil & W NUMBER OF CLAIMS: 11 EXEMPLARY CLAIM: 1

LINE COUNT: 1242

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Compositions for controlling harmful fungi which comprise, as active ingredients, at least one compound which inhibits respiration on the cytochrome complex III and at least one amide compound of the formula II

A--CO--NR.sup.1 R.sup.2

where A, R.sup.1 and R.sup.2 have the meanings given in the description. The compositions according to the invention can be used, in particular, for controlling botrvtis.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 189001-19-2 189001-21-6 189001-23-8

189001-25-0 189001-27-2

(synergistic agrochem. fungicide)

189001-19-2 USPATFULL

CN 3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-biphenyl]-2-yl)-, mixt. with 2-[[[1-(4-chlorophenyl)ethylidene]amino]oxy]methyl]- $\alpha$ -(methoxyimino)-N-methylbenzeneacetamide (9CI) (CA INDEX NAME)

CM 1

RN

CRN 188425-85-6 CMF C18 H12 C12 N2 O

CM :

CRN 139751-54-5 CMF C19 H20 C1 N3 O3

RN 189001-21-6 USPATFULL

CN 3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-bipheny1]-2-y1)-, mixt. with α-(methoxyimino)-N-methyl-2-(4-methyl-5-phenyl-2,7-dioxa-3,6diazaocta-3,5-dien-1-yl)benzeneacetamide (9CI) (CA INDEX NAME)

CM 1

CRN 188425-85-6 CMF C18 H12 C12 N2 O

CM

CRN 172719-88-9 CMF C21 H24 N4 O4

RN 189001-23-8 USPATFULL

Benzeneacetic acid,  $\alpha$ -(methoxyimino)-2-[(2-methylphenoxy)methyl]-, CN methyl ester, mixt. with 2-chloro-N-(4'-chloro[1,1'-biphenyl]-2-yl)-3pyridinecarboxamide (9CI) (CA INDEX NAME)

CM 1

CRN 188425-85-6 CMF C18 H12 C12 N2 O

CM 2 CRN 144167-04-4 CMF C18 H19 N O4

RN 189001-25-0 USPATFULL

CN 3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-biphenyl]-2-yl)-, mixt. with 2-[(2,5-dimethylphenoxy)methyl]-a-(methoxyimino)-N-methylbenzeneacetamide (9CI) (CA INDEX NAME)

CM 1

CRN 188425-85-6 CMF C18 H12 C12 N2 O

CM :

CRN 145451-07-6 CMF C19 H22 N2 O3

RN 189001-27-2 USPATFULL

CN 3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-biphenyl]-2-yl)-, mixt. with 2-[5-(4-fluorophenyl]-4-methyl-2,7-dioxa-3,6-diazaocta-3,5-dien-1-yl]-a-(methoxyimino)-N-methylbenzeneacetamide (9CI) (CA INDEX NAME)

CM 1

CRN 188425-85-6

CMF C18 H12 C12 N2 O

CM 2

CRN 172524-76-4 CMF C21 H23 F N4 O4

IT 188425-85-6D, mixts. with cytochrome complex III inhibitors

(synergistic agrochem. fungicides)

188425-85-6 USPATFULL RN

CN 3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-biphenyl]-2-yl)- (CA INDEX NAME)

L5 ANSWER 65 OF 68 USPATFULL on STN

ACCESSION NUMBER:

TITLE: INVENTOR(S): 2000:168039 USPATFULL Fungicidal mixtures

Muller, Bernd, Frankenthal, Germany, Federal Republic

Sauter, Hubert, Mannheim, Germany, Federal Republic of Ammermann, Eberhard, Heppenheim, Germany, Federal

Republic of Lorenz, Gisela, Neustadt, Germany, Federal Republic of Strathmann, Siegfried, Limburgerhof, Germany, Federal

Republic of Scherer, Maria, Landau, Germany, Federal Republic of Schelberger, Klaus, Gonnheim, Germany, Federal Republic of

Leyendecker, Joachim, Ladenburg, Germany, Federal Republic of

PATENT ASSIGNEE(S): BASF Aktiengesellschaft, Ludwigshafen, Germany, Federal Republic of (non-U.S. corporation)

KIND

PATENT INFORMATION:	US 6159992	20001212
	WO 9808385	19980305
APPLICATION INFO.:	US 1999-242715	19990222 (9)
	WO 1997-EP4541	19970821
		19990222 PCT 371 date
		19990222 PCT 102(e) date

NUMBER

NUMBER DATE

DATE

PRIORITY INFORMATION: DE 1996-19635079 19960830

DOCUMENT TYPE: Utility FILE SEGMENT: Granted

PRIMARY EXAMINER:

Robinson, Allen J. LEGAL REPRESENTATIVE: Keil & Weinkauf

NUMBER OF CLAIMS: 13 EXEMPLARY CLAIM: 1

LINE COUNT: 433

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention relates to a fungicidal mixture which comprises

a) a carbamate of the formula I ##STR1## where X is CH and N, n is 0, 1 or 2 and R is halogen, C.sub.1 -C.sub.4 -alkyl and C.sub.1 -C.sub.4 -haloalkyl, it being possible for the radicals R to be different when n is 2, or a salt or adduct thereof, and

b) an anilide of the formula II ##STR2## where R.sup.1 is fluorine or chlorine, or a salt or adduct thereof, in a synergistically active amount.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 203924-02-1 203924-05-4

(synergistic fungicidal mixture)

RN 203924-02-1 USPATFULL

CN Carbamic acid, N-[2-[[[1-(4-chlorophenyl)-1H-pyrazol-3vl]oxv]methvl]phenvl]-N-methoxv-, methvl ester, mixt, with 2-chloro-N-(4'-chloro[1,1'-biphenvl]-2-vl)-3-pvridinecarboxamide (CA INDEX NAME)

CM 1

CRN 188425-85-6 CMF C18 H12 C12 N2 O

CRN 175013-18-0 CMF C19 H18 C1 N3 O4

RN 203924-05-4 USPATFULL

CN Carbamic acid, methoxy[2-[[[1-(4-methylphenyl)-1H-pyrazol-3-yl]oxymethyl]phenyl]-, methyl ester, mixt. with 2-chloro-N-(4'-chloro[1,1'-biphenyl]-2-yl)-3-pyridinecarboxamide (9CI) (CA INDEX NAME)

CM

1

CRN 188425-85-6 CMF C18 H12 C12 N2 O

CM 2

CRN 175013-22-6 CMF C20 H21 N3 O4

IT 188425-85-6

(synergistic fungicides)

RN 188425-85-6 USPATFULL

L5 ANSWER 66 OF 68 USPATFULL on STN

ACCESSION NUMBER: 2000:150165 USPATFULL

TITLE: INVENTOR(S): Process and agent for controlling harmful fungi Eicken, Karl, Wachenheim, Germany, Federal Republic of

Ammermann, Eberhard, Heppenheim, Germany, Federal Republic of

Strathmann, Siegfried, Limburgerhof, Germany, Federal

Republic of

Lorenz, Gisela, Hambach, Germany, Federal Republic of Kohle, Harald, Bobenheim, Germany, Federal Republic of Retzlaff, Gunter, Romerberg, Germany, Federal Republic

PATENT ASSIGNEE(S):

BASF Aktiengesellschaft, Ludwigshafen, Germany, Federal Republic of (non-U.S. corporation) DATE

KIND

PATENT INFORMATION:	US 6143745	20001107	
	WO 9739630	19971030	
APPLICATION INFO.:	US 1998-171524	19981021	(9)
	WO 1997-EP2037	19970422	
		19981021	PCT 371 date
		19981021	PCT 102(e) date

NUMBER

NUMBER DATE

PRIORITY INFORMATION: DE 1996-19615976 19960422

DOCUMENT TYPE: Utility FILE SEGMENT: Granted

Robinson, Allen J. PRIMARY EXAMINER: LEGAL REPRESENTATIVE: Keil & Weinkauf

NUMBER OF CLAIMS: 15 EXEMPLARY CLAIM: 1

LINE COUNT: 759

CAS INDEXING IS AVAILABLE FOR THIS PATENT. AB

Compositions for controlling harmful fungi, containing in a solid or liquid carrier pyridaben of the formula: ##STR1## or fenpyroximate of the formula: ##STR2## or tebufenpyrad of the formula: ##STR3## and at least one amide compound of the following formula I:

where the substituents have the meanings indicated in the description. and methods for controlling harmful fungi using compositions of this type are described.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 188425-85-6D, mixts. containing

(synergistic fungicidal composition)

188425-85-6 USPATFULL RN

CN 3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-bipheny1]-2-y1)- (CA INDEX NAME)

L5 ANSWER 67 OF 68 USPATFULL on STN

ACCESSION NUMBER: 2000:134891 USPATFULL

TITLE: Fungicidal agents and method

INVENTOR(S): Eicken, Karl, Wachenheim, Germany, Federal Republic of Kohle, Harald, Bobenheim, Germany, Federal Republic of

Retzlaff, Gunter, Romerberg, Germany, Federal Republic of

Ammermann, Eberhard, Heppenheim, Germany, Federal

D 3 mm

Republic of

Lorenz, Gisela, Hambach, Germany, Federal Republic of Strathmann, Siegfried, Limburgerhof, Germany, Federal Republic of

\*\*\*\*\*

PATENT ASSIGNEE(S): BASF Aktiengesellschaft, Ludwigshafen, Germany, Federal Republic of (non-U.S. corporation)

	NOPIDEIN	KIND DAIL	
PATENT INFORMATION:	US 6130224	20001010	
	WO 9708952	19970313	
APPLICATION INFO.:	US 1998-29629	19980304	(9)
	WO 1996-EP3861	19960905	
		19980304	PCT 371 date
		19980304	PCT 102(e) date

NUMBER DATE

PRIORITY INFORMATION: DE 1995-19532752 19950905

DOCUMENT TYPE: Utility FILE SEGMENT: Granted

PRIMARY EXAMINER: Robinson, Allen J.

LEGAL REPRESENTATIVE: Keil & Weinkaug

NUMBER OF CLAIMS: 16 EXEMPLARY CLAIM: 1

LINE COUNT: 836

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention relates to compositions for controlling harmful fungi which comprise, as active ingredients, fenazaquin and at least one amide compound of the formula I

where A, R.sup.1 and R.sup.2 have the meanings given in the description. The compositions according to the invention are particularly useful for controlling botrytis.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 188425-86-7

AB

(synergistic fungicidal mixture)

RN 188425-86-7 USPATFULL

3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-bipheny1]-2-y1)-, mixt. with 4-[2-(4-(1,1-dimethylethyl)phenyl]ethoxylquinazoline (9CI) (CA INDEX NAME)

CM 1

CN

CRN 188425-85-6 CMF C18 H12 C12 N2 O

CM :

CRN 120928-09-8 CMF C20 H22 N2 O

L5 ANSWER 68 OF 68 USPATFULL on STN

ACCESSION NUMBER:

TITLE:

INVENTOR(S):

1999:160066 USPATFULL Heterocyclically substituted biphenylamine derivatives,

their preparation and their use as fungicides Eicken, Karl, Wachenheim, Germany, Federal Republic of Rang, Harald, Altrip, Germany, Federal Republic of Harreus, Albrecht, Ludwigshafen, Germany, Federal

Republic of Gotz, Norbert, Worms, Germany, Federal Republic of Ammermann, Eberhard, Heppenheim, Germany, Federal

Republic of Lorenz, Gisela, Hambach, Germany, Federal Republic of

Strathmann, Siegfried, Limburgerhof, Germany, Federal Republic of PATENT ASSIGNEE(S): BASF Aktiengesellschaft, Ludwigshafen, Germany, Federal Republic of (non-U.S. corporation)

KIND

DATE

PATENT INFORMATION:	US 5998450	19991207
	WO 9708148	19970306
APPLICATION INFO.:	US 1998-11717	19980217 (9)
	WO 1996-EP3753	19960826
		19980217 PCT 371 date
		19980217 PCT 102(e) date

NUMBER

DATE

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Fan, Jane

LEGAL REPRESENTATIVE: Keil & Weinkauf NUMBER OF CLAIMS: 16

EXEMPLARY CLAIM: 1 LINE COUNT: 659

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Biphenylamides of the general formula I ##STR1## and their salts (A= ##STR2## R.sup.1 =F; R.sup.2 =H, halogen, alkyl, CF.sub.3, alkoxy, alkylthio; R.sup.3 =Cl, CF.sub.3; R.sup.4 =H, CH.sub.3; R.sup.5 =Cl, CH.sub.3, CHF.sub.2, CF.sub.3;

R.sup.6 =CH.sub.3, CHF.sub.2, CF.sub.3), and compositions comprising I, the preparation of I and of the compositions, and of the use of both of them for controlling harmful fungi.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 188731-21-7P

(preparation of aroyl biphenylylamides as agrochem. and industrial fungicides)

RN 188731-21-7 USPATFULL

CN 3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro-5-fluoro[1,1'-biphenyl]-2-yl)-(CA INDEX NAME)

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(FILE 'HOME' ENTERED AT 16:10:17 ON 08 MAY 2008)

FILE 'REGISTRY' ENTERED AT 16:10:34 ON 08 MAY 2008

STRUCTURE UPLOADED

2 110 S L1 SSS FUL

FILE 'CAPLUS, USPATFULL' ENTERED AT 16:11:15 ON 08 MAY 2008

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L3
           262 S L2
T. 4
            0 S L3 AND (PLANT 1S GROWTH)
            68 S L3 AND PLANT AND GROWTH
=> s 13 and plant and growth and (regulating or regulator)
           46 L3 AND PLANT AND GROWTH AND (REGULATING OR REGULATOR)
=> s 13 and plant and (growth (1s) (regulating or regulator))
           46 L3 AND PLANT AND (GROWTH (1S) (REGULATING OR REGULATOR))
=> d 17 30-46 ibib abs kwic hitstr
L7 ANSWER 30 OF 46 USPATFULL on STN
ACCESSION NUMBER:
                      2002:338006 USPATFULL
TITLE:
                      Fungicidal mixtures based on amide compounds and
                      morpholine or piperidine derivatives
                       Schelberger, Klaus, Gonnheim, GERMANY, FEDERAL REPUBLIC
INVENTOR(S):
                       Scherer, Maria, Landau, GERMANY, FEDERAL REPUBLIC OF
                       Eicken, Karl, Wachenheim, GERMANY, FEDERAL REPUBLIC OF
                       Hampel, Manfred, Neustadt, GERMANY, FEDERAL REPUBLIC OF
                       Ammermann, Eberhard, Heppenheim, GERMANY, FEDERAL
                       REPUBLIC OF
                       Lorenz, Gisela, Neustadt, GERMANY, FEDERAL REPUBLIC OF
                       Strathmann, Siegfried, Limburgerhof, GERMANY, FEDERAL
                       REPUBLIC OF
                           NUMBER
                                       KIND DATE
                       -----
PATENT INFORMATION:
                       US 2002193372 A1 20021219
                       US 7109221
                                       B2 20060919
                      US 2002-183618 A1 20020628 (10)
APPLICATION INFO.:
RELATED APPLN. INFO.:
                       Division of Ser. No. US 2000-581834, filed on 19 Jun
                       2000, GRANTED, Pat. No. US 6436934 A 371 of
                       International Ser. No. WO 1998-EP8230, filed on 15 Dec
                       1998, UNKNOWN
                            NUMBER DATE
PRIORITY INFORMATION:
                      DE 1997-19756382 19971218
DOCUMENT TYPE:
                      Utility
FILE SEGMENT:
                      APPLICATION
LEGAL REPRESENTATIVE: KEIL & WEINKAUF, 1350 CONNECTICUT AVENUE, N.W.,
                      WASHINGTON, DC, 20036
NUMBER OF CLAIMS:
                      10
EXEMPLARY CLAIM:
                      1
LINE COUNT:
                       771
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AR
       Fungicidal mixtures comprise as active components
      a) an amide compound of the formula I
      A--CO--NR.sup.1R.sup.2 I
       in which A, R.sup.1 and R.sup.2 are as defined in the description, and
      b) dimethomorph or flumetover, and/or
      c) a valinamide of the formula III ##STR1##
       in which
```

R.sup.14 is naphthyl or phenyl, where the phenyl radical is substituted in the 4-position by a halogen atom, a C.sub.1-C.sub.4-alkyl or C.sub.1-C.sub.4-alkoxy group, and/or

- d) benalaxyl, ofurace, metalaxyl, furalaxyl or oxydixyl, and/or
- e) 1-(2-cyano-2-methoxyiminoacetyl)-3-ethylurea in a synergistically effective amount.
- CAS INDEXING IS AVAILABLE FOR THIS PATENT.
- SUMM . . . which further active ingredients against harmful fungi or other pests, such as insects, arachnids or nematodes, or else herbicidal or growth-regulating active ingredients or fertilizers can be admixed.
- SUMM [0117] They are especially important for controlling a large number of fungi in a variety of crop plants, such as cotton, vegetable species (eg. cucumbers, beans, tomatoes, potatoes and cucurbits), barley, grass, oats, bananas, coffee, maize, fruit species, . . .
- SUMM . . \_ mixtures of the compounds I and II and/or III to V is effected by spraying or dusting the seeds, the plants or the soils before or after sowing of the plants, or before or after plant emergence.
- SUMM . III to V, the mixtures, or the corresponding formulations, are applied by treating the harmful fungi, their habitat, or the plants, seeds, soils, areas, materials or spaces to be kept free from them with a fungicidally effective amount of the mixture.

  DETD 10148 a corresponds to the fungal infection of the treated
- plants in % and
- DETD [0149]  $\beta$  corresponds to the fungal infection of the untreated (control) plants in %
- DETD [0150] An efficacy of 0 means that the infection level of the treated plants corresponds to that of the untreated control plants; an efficacy of 100 means that the treated plants were not infected.
- DETD [0155] Leaves of potted plants of the variety "Große Fleischtomate" were sprayed to runoff point with an aqueous suspension which had been prepared from a. . and 27% of emulsifier. The next day, the leaves were infected with an aqueous zoospore suspension of Phytophthora infestans. The plants were subsequently placed in a chamber saturated with water vapor, at temperatures between 16 and 18° C. After 6 days, the tomato blight on the untreated but infected control plants had developed to such an extent that the infection could be determined visually in %.
- CLM What is claimed is:
  10. A method for controlling harmful fungi, which comprises treating the fungi, their habitat, or the materials, plants, seeds, soils, areas or spaces to be protected against fungal attack with a fungicidal mixture as claimed in any of.
- IT 227473-04-3 227473-05-4
- (synergistic fungicide)
- IT 57646-30-70, Furalaxyl, mixts. with amides 57837-19-10, Metalaxyl, mixts. with amides 57966-95-7D, Cymoxanil, mixts. with amides 58810-48-3D, Ofurace, mixts. with amides 71626-11-4D, Benalaxyl, mixts. with amides 77732-09-3D, Oxadixyl, mixts. with amides 110488-70-5D, Dimethomorph, mixts. with amides 119899-14-8D, mixts. containing 149708-54-3D, mixts. containing 154025-04-4D, Flumetover, mixts. with amides 188425-85-6D, mixts. containing (synergistic fungicides)
- IT 227473-05-4

RN 227473-05-4 USPATFULL

CN Alanine, N-(2,6-dimethylphenyl)-N-(methoxyacetyl)-, methyl ester, mixt. with 2-chloro-N-(4'-chloro[1,1'-biphenyl]-2-yl)-3-pyridinecarboxamide (9CI) (CA INDEX NAME)

CM 1

CRN 188425-85-6 CMF C18 H12 C12 N2 O

CM 2

CRN 57837-19-1 CMF C15 H21 N O4

- IT 188425-85-6D, mixts. containing (synergistic fungicides)
- RN 188425-85-6 USPATFULL
- CN 3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-biphenyl]-2-yl)- (CA INDEX NAME)

L7 ANSWER 31 OF 46 USPATFULL on STN

ACCESSION NUMBER: 2002:317442 USPATFULL

TITLE: Fungicidal mixtures based on amide compounds and pyridine derivatives

INVENTOR(S): Schelberger, Klaus, Gonnheim, GERMANY, FEDERAL REPUBLIC

OF

Scherer, Maria, Landau, GERMANY, FEDERAL REPUBLIC OF Elcken, Karl, Wachenheim, GERMANY, FEDERAL REPUBLIC OF Hampel, Manfred, Neustadt, GERMANY, FEDERAL REPUBLIC OF Ammermann, Eberhard, Heppenheim, GERMANY, FEDERAL REPUBLIC OF

Lorenz, Gisela, Neustadt, GERMANY, FEDERAL REPUBLIC OF Strathmann, Siegfried, Limburgerhof, GERMANY, FEDERAL

REPUBLIC OF

PATENT ASSIGNEE(S): BASF Aktiengesellschaft, Ludwigshafen, GERMANY, FEDERAL

REPUBLIC OF (non-U.S. corporation)

NUMBER KIND DATE

PATENT INFORMATION: US 6489348 B1 20021203

US 2003004184 A1 20030102

APPLICATION INFO:: US 2001-960485 20010924 (9)

RELATED APPLN. INFO.: Division of Ser. No. US 581444, now patented, Pat. No. US 6346538

NUMBER DATE

PRIORITY INFORMATION: DE 1997-19756380 19971218

DOCUMENT TYPE: Utility FILE SEGMENT: GRANTED

PRIMARY EXAMINER: Robinson, Allen J.

LEGAL REPRESENTATIVE: Keil & Weinkauf

NUMBER OF CLAIMS: 15

EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 0 Drawing Figure(s); 0 Drawing Page(s)

LINE COUNT: 885

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Fungicidal mixtures comprise as active components

a) an amide compound of the formula I

A--CO--NR.sup.1R.sup.2 I

in which A, R.sup.1 and R.sup.2 are as defined in the description, and

b) compounds of the formula II, their N-oxide or one of their salts ##STR1##

where the substituents R.sup.12 to R.sup.18 are as defined in the description, and/or

c) compounds of the formula III ##STR2##

where the substituents X.sup.1 to X.sup.5 and R.sup.19 to R.sup.22 are as defined in the description,

in a synergistically effective amount.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

SUMM . . . which further active ingredients against harmful fungi or other pests, such as insects, arachnids or nematodes, or else herbicidal or growth-regulating active ingredients or fertilizers can be admixed.

SUMM They are especially important for controlling a large number of fungi in a variety of crop plants, such as cotton, vegetable species (eg. cucumbers, beans, tomatoes, potatoes and cucurbits), barley, grass, oats, bananas, coffee, maize, fruit species, . . .

- SUMM . . . of the mixtures of the compounds I and II and/or III is effected by spraying or dusting the seeds, the plants or the soils before or after sowing of the plants, or before or after plant emergence.
- SUMM . . . II and/or III, the mixtures, or the corresponding formulations, are applied by treating the harmful fungi, their habitat, or the plants, seeds, soils, areas, materials or spaces to be kept free from them with a fungicidally effective amount of the mixture, . . .

DETD  $\alpha$  corresponds to the fungal infection of the treated plants in % and

- DETD  $\beta$  corresponds to the fungal infection of the untreated (control) plants in %
- DETD An efficacy of 0 means that the infection level of the treated plants corresponds to that of the untreated control plants; an efficacy of 100 means that the treated plants were not infected.
- DEID . . . dried on, the leaves were dusted with spores of powdery mildew of wheat (Erysiphe graminis forma specialis tritici). The test plants were subsequently kept in a greenhouse at 20-24° C. and 60-90% relative atmospheric humidity. After 7 days, the extent of . . .
- CLM What is claimed is:

  13. A method for controlling harmful fungi, which comprises treating the fungi, their habitat, or materials, plants, seeds, soils, areas or spaces to be protected against fungal attack with an effective amount of the composition defined in.
- IT 228099-28-3 228099-30-7 228099-32-9 228099-34-1
- (synergistic fungicide)
- IT 119899-14-8D, mixts. containing 149708-54-3D, mixts. containing 188425-85-6D, mixts. containing (syneraistic fungicides)
  - T 228099-30-7 228099-34-1
  - (synergistic fungicide)
- RN 228099-30-7 USPATFULL
- CN 3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-biphenyl]-2-yl)-, mixt. with 5,7-dichloro-4-(4-fluorophenoxy)quinoline (9CI) (CA INDEX NAME)

CM 1

CRN 188425-85-6 CMF C18 H12 C12 N2 O

CM 2

CRN 124495-18-7 CMF C15 H8 C12 F N O

RN 228099-34-1 USPATFULL

CN 3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-biphenyl]-2-yl)-, mixt. with N-[(ethoxyamino)[2-fluoro-6-(trifluoromethyl)phenyl]methylene]-4-methoxybenzeneacetamide (901) (CA INDEX NAME)

CM

CRN 188425-85-6 CMF C18 H12 C12 N2 O

CM 2

CRN 180408-18-8 CMF C19 H18 F4 N2 O3

IT 188425-85-6D, mixts. containing (synergistic fungicides)

(synergistic fungicides) RN 188425-85-6 USPATFULL

CN 3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-bipheny1]-2-y1)- (CA INDEX NAME)

L7 ANSWER 32 OF 46 USPATFULL on STN

ACCESSION NUMBER: 2002:280662 USPATFULL

TITLE: INVENTOR(S): Fungicidal mixtures based on amide compounds

Eicken, Karl, Wachenheim, GERMANY, FEDERAL REPUBLIC OF Ammermann, Eberhard, Heppenheim, GERMANY, FEDERAL

REPUBLIC OF

Stierl, Reinhard, Mutterstadt, GERMANY, FEDERAL

REPUBLIC OF

Lorenz, Gisela, Hambach, GERMANY, FEDERAL REPUBLIC OF Strathmann, Siegfried, Limburgerhof, GERMANY, FEDERAL

REPUBLIC OF

Scherer, Maria, Landau, GERMANY, FEDERAL REPUBLIC OF Schelberger, Klaus, Gonnheim, GERMANY, FEDERAL REPUBLIC

Hampel, Manfred, Neustadt, GERMANY, FEDERAL REPUBLIC OF

NUMBER KIND DATE US 2002156108 A1 20021024

US 6515000 APPLICATION INFO.:

B2 20030204 US 2001-12346 A1 20011212 (10)

> NUMBER DATE

PRIORITY INFORMATION: DE 2000-10062327 20001214

DOCUMENT TYPE: Utility

FILE SEGMENT: APPLICATION LEGAL REPRESENTATIVE: KEIL & WEINKAUF, 1350 CONNECTICUT AVENUE, N.W.,

WASHINGTON, DC, 20036

NUMBER OF CLAIMS: EXEMPLARY CLAIM: 1 LINE COUNT: 357

PATENT INFORMATION:

CAS INDEXING IS AVAILABLE FOR THIS PATENT. AB

Fungicidal mixtures, comprising

A) an amide compound of the formula I ##STR1##

in which

R.sup.1, R.sup.2 are identical or different and are halogen, nitro, cyano, C.sub.1-C.sub.8-alkyl, C.sub.2-C.sub.8-alkenyl, C.sub.2-C.sub.8-alkynyl, C.sub.1-C.sub.8-haloalkyl, C.sub.2-C.sub.8haloalkenyl, C.sub.2-C.sub.8-haloalkynyl, C.sub.1-C.sub.8-alkoxy, C.sub.1-C.sub.8-haloalkoxy, C.sub.1-C.sub.9-haloalkylthio, C.sub.1-C.sub.8-alkylsulfinyl or C.sub.1-C.sub.8-alkylsulfonyl;

x is 1, 2, 3 or 4;

y is 1, 2, 3, 4 or 5; and

B) dinitrophenol derivatives of the formulae II.a and II.b ##STR2##

in a synergistically effective amount, methods for controlling harmful fungi using mixtures of the compounds I and II and the use of the compounds I and II for preparing such mixtures are described.

## CAS INDEXING IS AVAILABLE FOR THIS PATENT.

- SUMM . . . and are therefore particularly suitable for controlling harmful fungi and in particular powdery mildew fungi in cereals, vegetables, fruit, ornamental plants and grapevines.
- SUMM . . . which further active compounds against harmful fungi or other pests, such as insects, arachnids or nematodes, or else herbicidal or growth-regulating active compounds or fertilizers can be admixed.
- SUMM [0018] They are especially important for controlling a large number of fungi in a variety of crop plants, such as cotton, vegetable species (e.g. cucumbers, beans, tomatoes, potatoes and cucurbits), barley, grass, oats, bananas, coffee, maize, fruit species. . .
- SUMM . . II or of the mixtures of the compounds I and II is effected by spraying or dusting the seeds, the plants or the soils before or after sowing of the plants, or before or after plant emergence.
- SUMM . . . I or II, the mixtures, or the corresponding formulations, are applied by treating the harmful fungi, their habitat, or the plants, seeds, soils, areas, materials or spaces to be kept free from them with a fungicidally effective amount of the mixture, . . .
- DETD [0040]  $\alpha$  corresponds to the fungal infection of the treated plants in % and
- DETD [0041]  $\beta$  corresponds to the fungal infection of the untreated (control) plants in %
- DETD [0042] An efficacy of 0 means that the infection level of the treated plants corresponds to that of the untreated control plants; an efficacy of 100 means that the treated plants were not infected.
- DETD . . . had dried on, the leaves were dusted with spores of mildew of wheat (Blumeria graminis forma specialis tritici). The test plants were subsequently placed in a greenhouse at 20-24° C. and 60-90% relative atmosh
- DETD . . . of active ingredient, 85% of cyclohexanone and 5% of emulsifier. 20 hours after the spray coating had dried on, the plants were inoculated with an aqueous spore suspension of mildew of cucumber (Sphaerotheca fuliginea). The plants were then cultivated in a greenhouse at 20-24° C. and 60-80% relative atmospheric humidity for 7 days. The extent of.
- CLM What is claimed is:

  3. A method for controlling harmful fungi, which comprises treating the harmful fungi, their habitat or the plants, seeds, soils, areas, materials or spaces to be kept free from them with a compound of the formula I as.
- IT 435347-15-2 435347-16-3
- (synergistic fungicidal mixture)
- IT 435347-16-3
- (synergistic fungicidal mixture)
- RN 435347-16-3 USPATFULL
- CN 2-Butenoic acid, 2(or 4)-isooctyl-4,6(or 2,6)-dinitrophenyl ester, mixt. with 2-chloro-N-(4"-chloro[1,1"-biphenyl]-2-yl)-3-pyridinecarboxamide (9C1) (CA INDEX NAME)
  - CM 1

CM 2

CRN 39300-45-3 CMF C18 H24 N2 O6 CCI IDS CDES \*

D1-NO2

D1- (C8H17)

L7 ANSWER 33 OF 46 USPATFULL on STN

ACCESSION NUMBER: TITLE:

INVENTOR(S):

2002:228353 USPATFULL

Fungicidal mixtures based on amide compounds Eicken, Karl, Wachenheim, GERMANY, FEDERAL REPUBLIC OF Ammermann, Eberhard, Heppenheim, GERMANY, FEDERAL

REPUBLIC OF Stierl, Reinhard, Mutterstadt, GERMANY, FEDERAL

REPUBLIC OF

KIND DATE

Lorenz, Gisela, Hambach, GERMANY, FEDERAL REPUBLIC OF Strathmann, Siegfried, Limburgerhof, GERMANY, FEDERAL REPUBLIC OF

Scherer, Maria, Landau, GERMANY, FEDERAL REPUBLIC OF Schelberger, Klaus, Gonnheim, GERMANY, FEDERAL REPUBLIC

Hampel, Manfred, Neustadt, GERMANY, FEDERAL REPUBLIC OF

	NUMBER	DA'	TE	
APPLICATION INFO.:	US 2001-12347	A1	20011212	(10)
	US 6503932	B2	20030107	
PATENT INFORMATION:	US 2002123515	A1	20020905	

NUMBER

PRIORITY INFORMATION: DE 2000-10062326 20001214

DOCUMENT TYPE: Utility

FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: KEIL & WEINKAUF, 1350 CONNECTICUT AVENUE, N.W.,

WASHINGTON, DC, 20036

NUMBER OF CLAIMS: 9
EXEMPLARY CLAIM: 1
LINE COUNT: 373

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Fungicidal mixtures, comprising

A) an amide compound of the formula I ##STR1##

in which

R.sup.1, R.sup.2 are identical or different and are halogen, nitro, cyano, C.sub.1-C.sub.8-alkyl, C.sub.2-C.sub.8-alkyl, C.sub.2-C.sub.8-haloalkyl, C.sub.2-C.sub.8-haloalkyl, C.sub.2-C.sub.8-haloalkyl, C.sub.2-C.sub.8-haloalkyl, C.sub.1-C.sub.8-haloalkyl, C.sub.1-C.sub.8-haloalkylthio, C.sub.1-C.sub.8-haloalkylthio, C.sub.1-C.sub.8-haloalkylulfinyl or C.sub.1-C.sub.8-alkylulfonyl;

x is 1, 2, 3 or 4;

y is 1, 2, 3, 4 or 5; and

B) the amino compound of the formula II ##STR2##

in a synergistically effective amount, methods for controlling harmful fungi using mixtures of the compounds I and II and the use of the compounds I and II for preparing such mixtures are described.

# CAS INDEXING IS AVAILABLE FOR THIS PATENT.

- SUMM . . . and are therefore particularly suitable for controlling harmful fungi and in particular powdery mildew fungi in cereals, vegetables, fruits, ornamental plants and grapevines.
- SUMM . . . which further active compounds against harmful fungi or other pests, such as insects, arachnids or nematodes, or else herbicidal or growth-regulating active compounds or fertilizers can be admixed.
- SUMM [0020] They are especially important for controlling a large number of fungi in a variety of crop plants, such as cotton, vegetable species (e.g. cucumbers, beans, tomatoes, potatoes and cucurbits), barley, grass, oats, bananas, coffee, maize, fruit species, . .
- SUMM . . . II or of the mixtures of the compounds I and II is effected by spraying or dusting the seeds, the plants or the soils before or after sowing of the plants, or before or after plant emergence.
- SUMM . . I or II, the mixtures, or the corresponding formulations, are applied by treating the harmful fungi, their habitat, or the plants, seeds, soils, areas, materials or spaces to be kept free
- DETD [0042] a corresponds to the fungal infection of the mixture, . .

  DETD [1042] a corresponds to the fungal infection of the treated plants in § and
- DETD [0043]  $\beta$  corresponds to the fungal infection of the untreated (control) plants in %
- DETD [0044] An efficacy of 0 means that the infection level of the treated plants corresponds to that of the untreated control plants; an efficacy of 100 means that the treated plants were not infected.
- DETD . . . the spray coating had dried on, dusted with spores of mildew of

wheat (Blumeria graminis forma specialis tritici). The test plants were then placed in a greenhouse at 20-24° C. and 60-90% relative atmospheric humidity. After 7 days, the extent of.

DETD . . . During this time, the spores germinated and the germinal tubes penetrated into the leaf tissue. The next day, the infected plants were sprayed to run off point with an aqueous formulation of the active compound prepared from a stock solution made. . . of active compound, 85% of cyclohexanone and 5% of emulsifier. After the spray coating had dried on, the test plants were cultivated in a greenhouse at 20-22° C. and 65-70% relative atmospheric humidity for 7 days. Thereafter, the extent of.

CLM What is claimed is:

3. A method for controlling harmful fungi, which comprises treating the harmful fungi, their habitat or the plants, seeds, soils, areas, materials or spaces to be kept free from them with a compound of the formula I as.

435347-12-9 435347-14-1

(synergistic fungicidal mixture)

435347-14-1

(synergistic fungicidal mixture)

RN 435347-14-1 USPATFULL

CN 3-Pvridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-biphenv1]-2-v1)-, mixt. with 8-(1,1-dimethylethyl)-N-ethyl-N-propyl-1,4-dioxaspiro[4.5]decane-2methanamine (9CI) (CA INDEX NAME)

CM 1

CRN 188425-85-6 CMF C18 H12 C12 N2 O

CM

INVENTOR(S):

CRN 118134-30-8 CMF C18 H35 N O2

L7 ANSWER 34 OF 46 USPATFULL on STN

2002:209523 USPATFULL

ACCESSION NUMBER: TITLE: Fungicide mixtures based on amide compounds and

morpholine or piperidine derivatives Schelberger, Klaus, Gonnheim, GERMANY, FEDERAL REPUBLIC

Scherer, Maria, Landau, GERMANY, FEDERAL REPUBLIC OF

Eicken, Karl, Wachenheim, GERMANY, FEDERAL REPUBLIC OF Hampel, Manfred, Neustadt, GERMANY, FEDERAL REPUBLIC OF Ammermann, Eberhard, Heppenheim, GERMANY, FEDERAL REPUBLIC OF

Lorenz, Gisela, Neustadt, GERMANY, FEDERAL REPUBLIC OF Strathmann, Siegfreid, Limburgerhof, GERMANY, FEDERAL

REPUBLIC OF

PATENT ASSIGNEE(S): BASF Aktiengesellschaft, Ludwigshafen, GERMANY, FEDERAL REPUBLIC OF (non-U.S. corporation)

	NUMBER	VIMD	DAIL	
PATENT INFORMATION:	US 6436934	B1	20020820	
	WO 9931976		19990701	
APPLICATION INFO.:	US 2000-581834		20000619	(9)
	WO 1998-EP8230		19981215	
			20000619	PCT 371 date

DOCUMENT TYPE: Utility FILE SEGMENT: GRANTED

PRIMARY EXAMINER: Robinson, Allen J.

LEGAL REPRESENTATIVE: Keil & Weinkauf NUMBER OF CLAIMS: 19

NUMBER OF CLAIMS: 19 EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 0 Drawing Figure(s); 0 Drawing Page(s)

LINE COUNT: 745

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Fungicidal mixtures comprise as active components

a) an amide compound of the formula I

A--CO--NR.sup.1R.sup.2 I

in which A, R.sup.1 and R.sup.2 are as defined in the description, and

- b) dimethomorph or flumetover, and/or
- c) a valinamide of the formula III ##STR1##

in which

R.sup.13 is C.sub.3-C.sub.4-alkyl and

R.sup.14 is naphthyl or phenyl, where the phenyl radical is substituted in the 4-position by a halogen atom, a C.sub.1-C.sub.4-alkyl or C.sub.1-C.sub.4-alkoxy group, and/or

- d) benalaxyl, ofurace, metalaxyl, furalaxyl or oxydixyl, and/or
- e) 1-(2-cyano-2-methoxyiminoacety1)-3-ethylurea in a synergistically effective amount.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

SUMM . . . which further active ingredients against harmful fungi or other pests, such as insects, arachnids or nematodes, or else herbicidal or growth-regulating active ingredients or fertilizers can be admixed.

SUMM They are especially important for controlling a large number of fungi in a variety of crop plants, such as cotton, vegetable species

```
(eq. cucumbers, beans, tomatoes, potatoes and cucurbits), barley, grass,
oats, bananas, coffee, maize, fruit species,. .
. . . mixtures of the compounds I and II and/or III to V is effected
by spraying or dusting the seeds, the plants or the soils
before or after sowing of the plants, or before or after
plant emergence.
. . . III to V, the mixtures, or the corresponding formulations, are
applied by treating the harmful fungi, their habitat, or the
plants, seeds, soils, areas, materials or spaces to be kept free
from them with a fungicidally effective amount of the mixture, . . .
\alpha corresponds to the fungal infection of the treated
plants in % and
β corresponds to the fungal infection of the untreated (control)
plants in %.
An efficacy of 0 means that the infection level of the treated is
plants corresponds to that of the untreated control
plants; an efficacy of 100 means that the treated plants
were not infected.
Leaves of potted plants of the variety "Große
Fleischtomate" were sprayed to runoff point with an aqueous suspension
which had been prepared from a. . . and 27% of emulsifier. The next
day, the leaves were infected with an aqueous zoospore suspension of
Phytophthora infestans. The plants were subsequently placed in
a chamber saturated with water vapor, at temperatures between 16 and
18° C. After 6 days, the tomato blight on the untreated but
```

CLM What is claimed is:

14. A method for controlling harmful fungi, which comprises treating the fungi, their habitat, or materials, plants, seeds, soils, areas or spaces to be protected against fungal attack with an effective amount of the composition defined in.

infected control plants had developed to such an extent that the infection could be determined visually in %.

- IT 227473-04-3 227473-05-4 (synergistic fungicide)
  - T 57646-30-7D, Furalaxyl, mixts. with amides 57837-19-1D, Metalaxyl, mixts. with amides 57966-95-7D, Cymoxanil, mixts. with amides 58810-48-3D, Ofurace, mixts. with amides 71626-11-4D, Benalaxyl, mixts. with amides 77732-09-3D, Oxadixyl, mixts. with amides 110488-70-5D, Dimethomorph, mixts. with amides 119899-14-8D, mixts. containing 149708-54-3D, mixts. containing 154025-04-4D, Flumetover, mixts. with amides 188425-85-6D, mixts. containing (syneroistic funcicides)
- IT 227473-05-4 (synergistic fungicide)
- RN 227473-05-4 USPATFULL
- CN Alanine, N-(2,6-dimethylphenyl)-N-(methoxyacetyl)-, methyl ester, mixt. with 2-chloro-N-(4'-chloro[1,1'-biphenyl]-2-yl)-3-pyridinecarboxamide (9CI) (CA INDEX NAME)
  - CM 1

SUMM

SUMM

DETD

DETD

DETD

DETD

- CRN 188425-85-6
- CMF C18 H12 C12 N2 O

CM 2

CRN 57837-19-1 CMF C15 H21 N O4

188425-85-6D, mixts. containing (synergistic fungicides)

RN 188425-85-6 USPATFULL

3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-bipheny1]-2-y1)- (CA CN INDEX NAME)

L7 ANSWER 35 OF 46 USPATFULL on STN ACCESSION NUMBER:

2002:152666 USPATFULL

REPUBLIC OF

TITLE:

Fungicidal mixtures based on amide compounds and tetrachloroisophthalonitrile

INVENTOR(S):

Schelberger, Klaus, Gonnheim, GERMANY, FEDERAL REPUBLIC

Scherer, Maria, Landau, GERMANY, FEDERAL REPUBLIC OF Eicken, Karl, Wachenheim, GERMANY, FEDERAL REPUBLIC OF Hampel, Manfred, Neustadt, GERMANY, FEDERAL REPUBLIC OF

Ammermann, Eberhard, Heppenheim, GERMANY, FEDERAL REPUBLIC OF

Lorenz, Gisela, Neustadt, GERMANY, FEDERAL REPUBLIC OF Strathmann, Siegfried, Limburgerhof, GERMANY, FEDERAL

PATENT ASSIGNEE(S): BASF Aktiengesellschaft, Ludwigshafen, GERMANY, FEDERAL

## REPUBLIC OF (non-U.S. corporation)

		NUMBER	KIND	DATE			
PATENT INFORMATION:	US	6410572	B1	20020625			
	WO	9931983		19990701			
APPLICATION INFO.:	US	2000-581795		20000619	(9)		
	WO	1998-EP8226		19981215			
				20000619	PCT	371	date

DOCUMENT TYPE: Utility

FILE SEGMENT: GRANTED

Robinson, Allen J. PRIMARY EXAMINER: LEGAL REPRESENTATIVE: Keil & Weinkauf

NUMBER OF CLAIMS: 17

EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 0 Drawing Figure(s); 0 Drawing Page(s) 658

LINE COUNT:

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

Fungicidal mixtures comprise as active components

a) an amide compound of the formula I

A--CO--NR.sup.1R.sup.2

in which

A is an aryl group or an aromatic or non-aromatic, 5- or 6-membered heterocycle which has from 1 to 3 hetero atoms which are selected from O. N and S:

where the aryl group or the heterocycle may or may not have 1, 2 or 3 substituents which are selected, independently of one another, from alkyl, halogen, CHF.sub.2, CF.sub.3, alkoxy, haloalkoxy, alkylthio, alkylsulfinyl and alkylsulfonyl;

R.sup.1 is a hydrogen atom;

R.sup.2 is a phenyl or cycloalkyl group which may or may not have 1, 2 or 3 substituents which are selected, independently of one another, from alkyl, alkenyl, alkynyl, alkoxy, alkenyloxy, alkynyloxy, cycloalkyl, cycloalkenyl, cycloalkyloxy, cycloalkenyloxy, phenyl and halogen, where the aliphatic and cycloaliphatic radicals may be partially or fully halogenated and/or the cycloaliphatic radicals may be substituted by from 1 to 3 alkyl groups and where the phenyl group may have from 1 to 5 halogen atoms and/or from 1 to 3 substituents which are selected, independently of one another, from alkyl, haloalkyl, alkoxy, haloalkoxy, alkylthio and haloalkylthio, and where the amidic phenyl group may or may not be condensed with a saturated 5-membered ring which may or may not be substituted by one or more alkyl groups and/or may have a hetero atom selected from O and S, and

b) tetrachloroisophthalonitrile II ##STR1##

in a synergistically effective amount.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

SUMM . . . which further active ingredients against harmful fungi or other pests, such as insects, arachnids or nematodes, or else herbicidal or growth-regulating active ingredients or fertilizers can be admixed.

SUMM They are especially important for controlling a large number of fungi in a variety of crop plants, such as cotton, vegetable species

(e.g. cucumbers, beans, tomatoes, potatoes and cucurbits), barley, grass, oats, bananas, coffee, maize, fruit species,. . .

SUMM . . . II or of the mixtures of the compounds I and II is effected by spraying or dusting the seeds, the plants or the soils before or after sowing of the plants, or before or after plant emergence.

SUMM . . . I or II, the mixtures, or the corresponding formulations, are applied by treating the harmful fungi, their habitat, or the plants, seeds, soils, areas, materials or spaces to be kept free from them with a fungicially effective amount of the mixture.

from them with a fungicidally effective amount of the mixture, . . .

DETD \( \alpha \) corresponds to the fungal infection of the treated

plants in % and DETD  $\beta$  corresponds to the fungal infection of the untreated (control)

DETD β corresponds to the fungal infection of the untreated (control) plants in %

DETD An efficacy of 0 means that the infection level of the treated plants corresponds to that of the untreated control plants; an efficacy of 100 means that the treated plants were not infected.

DETD Leaves of potted plants of the variety "Große
Fleichtomate" were sprayed to runoff point with an aqueous suspension
which had been prepared from a. . . and 27% of emulsifier. The next
day, the leaves were infected with an aqueous zoospore suspension of
Phytophthora infestans. The plants were subsequently placed in
a water-vapor-saturated chamber at 16-18° C. After 6 days, the
tomato blight on the untreated but infected control plants had
developed to such an extent that the infection could be determined
visually in %. The test results are shown. . .

CLM What is claimed is:

11. A method for controlling harmful fungi, which comprises treating the fungi, their habitat, or materials, plants, seeds, soils, areas or spaces to be protected against fungal attack with an effective amount of the composition defined in.

IT 228101-70-0 228101-74-4 228101-80-2 (synergistic fungicide)

IT 228101-74-4

(synergistic fungicide)

RN 228101-74-4 USPATFULL

CN 3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-biphenyl]-2-yl)-, mixt. with 2,4,5,6-tetrachloro-1,3-benzenedicarbonitrile (9CI) (CA INDEX NAME)

CM

CRN 188425-85-6 CMF C18 H12 C12 N2 O

CM

CRN 1897-45-6 CMF C8 C14 N2

L7 ANSWER 36 OF 46 USPATFULL on STN

ACCESSION NUMBER: 2002:144292 USPATFULL

TITLE: Fungicide mixtures based on amide compounds and

pyridine derivatives

Schelberger, Klaus, Gonnheim, GERMANY, FEDERAL REPUBLIC INVENTOR(S):

OF

Scherer, Maria, Landau, GERMANY, FEDERAL REPUBLIC OF Eicken, Karl, Wachenheim, GERMANY, FEDERAL REPUBLIC OF

Hampel, Manfred, Neustadt, GERMANY, FEDERAL REPUBLIC OF Ammermann, Eberhard, Heppenheim, GERMANY, FEDERAL REPUBLIC OF

Lorenz, Gisela, Neustadt, GERMANY, FEDERAL REPUBLIC OF Strathmann, Siegfried, Limburgerhof, GERMANY, FEDERAL

REPUBLIC OF PATENT ASSIGNEE(S): BASF Aktiengesellschaft, Ludwigshafen, GERMANY, FEDERAL

REPUBLIC OF (non-U.S. corporation)

		NUMBER	KIND	DATE			
PATENT INFORMATION:	US	6407126	B1	20020618			
	WO	9931951		19990701			
APPLICATION INFO.:	US	2000-581905		20000619	(9)		
	WO	1998-EP8225		19981215			
				20000619	PCT	371	date

NUMBER DATE

PRIORITY INFORMATION: DE 1997-19756378 19971218

DOCUMENT TYPE: Utility FILE SEGMENT: GRANTED

PRIMARY EXAMINER: Aulath, Charandit S. Keil & Weinkauf LEGAL REPRESENTATIVE:

NUMBER OF CLAIMS:

EXEMPLARY CLAIM:

NUMBER OF DRAWINGS: O Drawing Figure(s); O Drawing Page(s) LINE COUNT:

718 CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Fungicidal mixtures comprise as active components

a) an amide compound of the formula I

A--CO--NR.sup.1R.sup.2 (I)

and at least one further ingredient selected from

b) a dithiocarbamate (II) selected from the group consisting of manganese ethylenebis(dithiocarbamate) (zinc complex) (IIa),

manganese ethylenebis(dithiocarbamat) (IIb),

zinc ammoniate ethylenebis(dithiocarbamate) (IIc) and

zinc ethylenebis(dithiocarbamate) (IId)

c) a carbamate of the formula III

(CH.sub.3).sub.2N--CH.sub.2CH.sub.2CH.sub.2-NH--CO.sub.2--CH.sub.2CH.sub.2CH.sub.3 (III)

- d) an N-acetonylbenzamide of the formula IV ##STR1##
- or a salt or adduct thereof,
- e) an active compound of the formula V, ##STR2##
- f) an active compound of the formula VI, ##STR3##

and

g) an active compound of the formula VII, ##STR4##

where the substituents are as defined in the description, in a synergistically effective amount.

## CAS INDEXING IS AVAILABLE FOR THIS PATENT.

- SUMM . . . which further active ingredients against harmful fungi or other pests, such as insects, arachnids or nematodes, or else herbicidal or growth-regulating active ingredients or fertilizers can be admixed.
- SUMM They are especially important for controlling a large number of fungi in a variety of crop plants, such as cotton, vegetable species (e.g. cucumbers, beans, tomatoes, potatoes and cucurbits), barley, grass, oats, bananas, coffee, maize, fruit species, . . .
- SUMM . . . II and/or III and/or IV and/or VI and/or VI is effected by spraying or dusting the seeds, the plants or the soils before or after sowing of the plants, or before or after plant emergence.
- SUMM . . . VI and/or VII, the mixtures, or the corresponding formulations, are applied by treating the harmful fungi, their habitat, or the plants, seeds, soils, areas, materials or spaces to be kept free from them with a fungicidally effective amount of the mixture, . . .
- DETD  $\alpha$  corresponds to the fungal infection of the treated plants in % and
- DETD  $\beta$  corresponds to the fungal infection of the untreated (control) plants in %
- DETD An efficacy of 0 means that the infection level of the treated plants corresponds to that of the untreated control plants; an efficacy of 100 means that the treated plants were not infected.
- DETD Leaves of potted plants of variety "Große Fleischtomate" were sprayed to runoff point with an aqueous suspension which had been prepared from a stock. . . and 27% of emulsifier. The next day, the leves were infected with an aqueous zoospore suspension of Phytophthora infectans. The plants were subsequently placed in a chamber saturated with water vapor, at temperatures between 16 and 18° C. After 6 days, the tomator blight on the untreated but infected control plants had developed to such an extent that the infection could be determined visually in %.
- CLM What is claimed is:
  - 5. A method for controlling harmful fungi, which comprises treating the

fungi, their habitat, or materials, plants, seeds, soils, areas or spaces to be protected against fungal attack with an effective amount of the composition defined in. . . . . . . . . . . . . . . . . .

IT 227756-91-4 227756-92-5 227757-29-1

(synergistic fungicide)

IT 8018-01-7D, Mancozeb, mixts. with amides 9006-42-2D, Metiram, mixts. with amides 12122-67-7D, Zineb), mixts. with amides 12427-38-2D, (Maneb, mixts. with amides 24579-73-5D, Propamocarb, mixts. with amides 119899-14-8D, mixts. containing 131807-57-3D, Famoxadone, mixts. with amides 149708-54-3D, mixts. containing 188425-85-6D, mixts. containing

(synergistic fungicides)

IT 227757-29-1 (synergistic fungicide)

RN 227757-29-1 USPATFULL

CN 3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-biphenyl]-2-yl)-, mixt. with 5-methyl-5-(4-phenoxyphenyl)-3-(phenylamino)-2,4-oxazolidinedione (9CI) (CA INDEX NAME)

CM 1

CRN 188425-85-6 CMF C18 H12 C12 N2 O

CM :

CRN 131807-57-3 CMF C22 H18 N2 O4

- IT 188425-85-6D, mixts. containing (synergistic fungicides)
- RN 188425-85-6 USPATFULL
- CN 3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-biphenyl]-2-yl)- (CA INDEX NAME)

L7 ANSWER 37 OF 46 USPATFULL on STN

ACCESSION NUMBER: 2002:81491 USPATFULL

TITLE: Fungicide mixtures based on pyridine amides and

fenarimol

Schelberger, Klaus, Gonnheim, GERMANY, FEDERAL REPUBLIC INVENTOR(S):

Scherer, Maria, Landau, GERMANY, FEDERAL REPUBLIC OF Eicken, Karl, Wachenheim, GERMANY, FEDERAL REPUBLIC OF Hampel, Manfred, Neustadt, GERMANY, FEDERAL REPUBLIC OF

Ammermann, Eberhard, Heppenheim, GERMANY, FEDERAL

REPUBLIC OF

Lorenz, Gisela, Neustadt, GERMANY, FEDERAL REPUBLIC OF Strathmann, Siegfried, Limburgerhof, GERMANY, FEDERAL REPUBLIC OF

PATENT ASSIGNEE(S): BASF Aktiengesellschaft, Ludwigshafen, GERMANY, FEDERAL

REPUBLIC OF (non-U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 6372748	B1	20020416	
	WO 9931985		19990701	
APPLICATION INFO.:	US 2000-581426		20000613	(9)
	WO 1998-EP8228		19981215	
			20000613	PCT 371 date

NUMBER DATE

PRIORITY INFORMATION: DE 1997-19756387

DOCUMENT TYPE: Utility FILE SEGMENT: GRANTED

PRIMARY EXAMINER: Robinson, Allen J.

LEGAL REPRESENTATIVE: Keil & Weinkauf

NUMBER OF CLAIMS: 9

EXEMPLARY CLAIM:

NUMBER OF DRAWINGS: O Drawing Figure(s); O Drawing Page(s) 613

LINE COUNT:

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Fungicidal mixtures comprise as active components

a) an amide compound of the formula I

1

A--CO--NR.sup.1R.sup.2 I

in which

A is an aryl group or an aromatic or non-aromatic, 5- or 6-membered heterocycle which has from 1 to 3 hetero atoms selected from O, N and S;

where the aryl group or the heterocycle may or may not have 1, 2 or 3 substituents which are selected, independently of one another, from

alkyl, halogen, CHF.sub.2, CF.sub.3, alkoxy, haloalkoxy, alkylthio, alkylsulfynyl and alkylsulfonyl;

R.sup.1 is a hydrogen atom;

R.sup.2 is a phenyl or cycloalkyl group which may or may not have 1, 2 or 3 substituents which are selected, independently of one another, from alkyl, alkenyl, alkenyl, alkoxy, alkenyloxy, alkynyloxy, cycloalkyl, cycloalkyl, cycloalkyl, cycloalkyl, cycloalkyl, eycloalkyl, penyl and halogen, where the aliphatic and cycloaliphatic radicals may be partially or fully halogenated and/or the cycloaliphatic radicals may be substituted by from 1 to 3 alkyl groups and where the phenyl group may have from 1 to 5 halogen atoms and/or from 1 to 3 substituents which are selected, independently of one another, from alkyl, haloalkyl, alkoxy, haloalkoxy, alkylthio and haloalkylthio, and where the amidic phenyl group may or may not be substituted by one or more alkyl groups and/or may have a hetero atom selected from 0 and S, and

b) ( $\pm$ )-(2-chlorophenyl)(4-chlorophenyl)(pyrimidin-5-yl)-methanol#STR1##

in a synergistically effective amount.

## CAS INDEXING IS AVAILABLE FOR THIS PATENT.

- SUMM . . which further active ingredients against harmful fungi or other pests, such as insects, arachnids or nematodes, or else herbicidal or growth-regulating active ingredients or fertilizers can be admixed.
- SUMM They are especially important for controlling a large number of fungi in a variety of crop plants, such as cotton, vegetable species (e.g. cucumbers, beans, tomatoes, potatoes and cucurbits), barley, grass, oats, bananas, coffee, maize, fruit species, .
- SUMM . . . II or of the mixtures of the compounds I and II is effected by spraying or dusting the seeds, the plants or the soils before or after sowing of the plants, or before or after plant emergence.
- SUMM . . I and II, the mixtures, or the corresponding formulations, are applied by treating the harmful fungi, their habitat, or the plants, seeds, soils, areas, materials or spaces to be kept free from them with a fungicidally effective amount of the mixture, . . .
- DETD α corresponds to the fungal infection of the treated plants in % and
- DETD  $\beta$  corresponds to the fungal infection of the untreated (control) plants in \$
- DETD An efficacy of 0 means that the infection level of the treated plants corresponds to that of the untreated control plants; an efficacy of 100 means that the treated plants were not infected.
- DETD . . . During this time, the spores germinated and the germinal tubes penetrated into the leaf tissue. The next day, the infected plants were sprayed to runoff point with an ageuous formulation of active ingredient prepared from a stock solution consisting of 10% of active ingredient, 63% of cyclohexanone and 27% of emulsifier. After the spray coating had dried on, the test plants were cultivated in a greenhouse at from 20 to 22° C. and from 65 to 70% of relative atmospheric humidity.
- CLM What is claimed is:

  9. A method for controlling harmful fungi, which comprises treating the fungi, their habitat, or materials, plants, seeds, soils, areas or spaces to be protected against fungal attack with an effective amount of the composition defined in.

IT 228098-41-7 228098-42-8 228098-43-9

(synergistic fungicide)

IT 228098-42-8

(synergistic fungicide)

RN 228098-42-8 USPATFULL

CN 3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-bipheny1]-2-y1)-, mixt. with  $\alpha$ -(2-chloropheny1)- $\alpha$ -(4-chloropheny1)-5-

pyrimidinemethanol (9CI) (CA INDEX NAME)

CM :

CRN 188425-85-6

CMF C18 H12 C12 N2 O

CM 2

CRN 60168-88-9 CMF C17 H12 C12 N2 O

L7 ANSWER 38 OF 46 USPATFULL on STN

ACCESSION NUMBER: 2002:70001 USPATFULL

TITLE: Fungicide mixtures based on pyridine carboxamides

INVENTOR(S): Schelberger, Klaus, Gonnheim, GERMANY, FEDERAL REPUBLIC OF

OF Scherer, Maria, Landau, GERMANY, FEDERAL REPUBLIC OF

Eicken, Karl, Wachenheim, GERMANY, FEDERAL REFUBLIC OF Hampel, Manfred, Neustadt, GERMANY, FEDERAL REFUBLIC OF Ammermann, Eberhard, Heppenheim, GERMANY, FEDERAL

REPUBLIC OF

Lorenz, Gisela, Neustadt, GERMANY, FEDERAL REPUBLIC OF Strathmann, Siegfried, Limburgerhof, GERMANY, FEDERAL

REPUBLIC OF

PATENT ASSIGNEE(S): BASF Aktiengesellschaft, Ludwigshafen, GERMANY, FEDERAL REPUBLIC OF (non-U.S. corporation)

NUMBER KIND DATE

PATENT INFORMATION: US 6365608 B1 20020402

WO 9931981 19990701 US 2000-581833 20000619 (9) WO 1998-EF8231 19981215

20000619 PCT 371 date

PRIORITY INFORMATION: DE 1997-19756379 19971218

NUMBER DATE

DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED

FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Robinson, Allen J.
LEGAL REPRESENTATIVE: Keil & Weinkauf

NUMBER OF CLAIMS: 16 EXEMPLARY CLAIM: 1

EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 0 Drawing Figure(s); 0 Drawing Page(s)

LINE COUNT: 748

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Fungicidal mixtures comprise as active components

a) an amide compound of the formula I

A--CO--NR.sup.1R.sup.2 I

in which

A is an aryl group or an aromatic or non-aromatic, 5- or 6-membered heterocycle which has from 1 to 3 hetero atoms selected from O, N and S;

where the aryl group or the heterocycle may or may not have 1, 2 or 3 substituents which are selected, independently of one another, from alkyl, halogen, CHF.sub.2, CF.sub.3, alkoxy, haloalkoxy, alkylthio, alkylsulfynyl and alkylsulfynyl and selected the selected by the

R.sup.1 is a hydrogen atom;

R.sup.2 is a phenyl or cycloalkyl group which may or may not have 1, 2 or 3 substituents which are selected, independently of one another, from alkyl, alkenyl, alkenyl, alkoxy, alkenyloxy, alkynyloxy, cycloalkyl, cycloalkyloxy, cycloalkenyloxy, penyl and halogen, where the aliphatic and cycloaliphatic radicals may be partially or fully halogenated and/or the cycloaliphatic radicals may be substituted by from 1 to 3 alkyl groups and where the phenyl group may have from 1 to 5 halogen atoms and/or from 1 to 3 substituents which are selected, independently of one another, from alkyl, haloalkyl, alkoxy, haloalkoxy, alkylthio and haloalkylthio, and where the amidic phenyl group may or may not be condensed with a saturated 5-membered ring which may or may not be substituted by one or more alkyl groups and/or may have a hetero atom selected from 0 and S. and

- b) fungicides from the group of the dicarboximides and/or
- c) pyrimidine derivatives of the formula III ##STR1##

in which R is methyl, propyn-1-yl or cyclopropyl, and/or

- d) fludioxinil or fenpiclonil and/or
- e) captan, captafol or folpet and/or
- f) fluazinam and/or
- g) dichlofluanid or tolylfluanid

in a synergistically effective amount.

- CAS INDEXING IS AVAILABLE FOR THIS PATENT.
- SUMM . . . which further active ingredients against harmful fungi or other pests, such as insects, arachnids or nematodes, or else herbicidal or growth-regulating active ingredients or fertilizers, can be admixed.
- SUMM They are especially important for controlling a large number of fungi in a variety of crop plants, such as cotton, vegetable species (eg. cucumbers, beans, tomatoes, potatoes and cucurbits), barley, grass, oats, ban
- SUMM ... mixtures of the compounds I and II and/or III to IX is effected by spraying or dusting the seeds, the plants or the soils before or after sowing of the plants, or before or after plant emergence.
- SUMM . III to IX, the mixtures, or the corresponding formulations, are applied by treating the harmful fungi, their habitat, or the plants, seeds, soils, areas, materials or spaces to be kept free from them with a fungicidally effective amount of the mixture.
- DETD α corresponds to the fungal infection of the treated plants in % and
- DETD  $\beta$  corresponds to the fungal infection of the untreated (control) plants in %
- DETD An efficacy of 0 means that the infection level of the treated plants corresponds to that of the untreated control plants; an efficacy of 100 means that the treated plants were not infected.
- DETD . a stock solution comprising 10% of active ingredient, 63% of cyclohexanone and 27% of emulsifier. The next day, the treated plants were inoculated with a spore suspension of Botrytis cinerea containing 1.7+10.sup. 6 spores per ml of a 2% strength aqueous Biomalz solution. The test plants were subsequently placed in a climatized chamber with high atmospheric humidity at 22-24° C. After 5 days, the extent of.
- CLM What is claimed is:

  13. A method for controlling harmful fungi, which comprises treating the fungi, their habitat, or materials, plants, seeds, soils, areas or spaces to be protected against fungal attack with an effective amount of the composition defined in.
- IT 228113-47-1 228113-48-2 228113-49-3 228113-50-6 228113-51-7 228113-52-8 228113-53-9 228113-54-0 228113-55-1 228113-56-2
  - (synergistic fungicide)
- IT 133-06-2D, Captan, mixts. with amides 133-07-3D, Folpet, mixts. with amides 731-27-1D, Tolylfluanid, mixts. with amides 1085-98-9D, Dichlofluanid, mixts. with amides 2425-06-1D, Captafol, mixts. with amides 32809-16-8D, Procymidone, mixts. with amides 36734-19-7D, Iprodione, mixts. with amides 50471-44-8D, Vinclozolin, mixts. with amides 53112-28-0D, mixts. with amides 74738-17-3D, Fenpiclonil, mixts. with amides 792-59-6D, Fluazinam, mixts. with amides 84332-86-5D, (Chlozolinate, mixts. with amides 10235-47-7D, mixts. with amides 118999-14-8D, mixts. containing 121552-61-2D, mixts. with amides 131341-86-1D, Fludioxonil, mixts. with amides 149708-54-3D, mixts. containing 184825-88-6D, mixts. containing
- (synergistic fungicides) IT 228113-48-2 228113-50-6 228113-52-8
  - 228113-54-0 228113-56-2 (synergistic fungicide)
- RN 228113-48-2 USPATFULL
- CN 3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-bipheny1]-2-y1)-, mixt. with 3a,4,7,7a-tetrahydro-2-[(trichloromethy1)thio]-1H-isoindole-1,3(2H)-

dione (9CI) (CA INDEX NAME)

CM 1

CRN 188425-85-6 CMF C18 H12 C12 N2 O

CM 2

CRN 133-06-2 CMF C9 H8 C13 N O2 S

RN 228113-50-6 USPATFULL CN 3-Pvridinecarboxamide,

3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-biphenyl]-2-yl)-, mixt. with 2-[(trichloromethyl)thio]-1H-isoindole-1,3(2H)-dione (9CI) (CA INDEX NAME)

CM 1

CRN 188425-85-6 CMF C18 H12 C12 N2 O

CM :

CRN 133-07-3

CMF C9 H4 C13 N O2 S

RN 228113-52-8 USPATFULL

CN 3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-biphenyl]-2-yl)-, mixt. with 1,1-dichloro-N-[(dimethylamino) sulfonyl]-1-fluoro-Nphenylmethanesulfenamide (9CI) (CA INDEX NAME)

CM 1

CRN 188425-85-6 CMF C18 H12 C12 N2 O

CM

CRN 1085-98-9 CMF C9 H11 C12 F N2 O2 S2

$$\begin{array}{c|c} O & Ph \\ \parallel & \parallel \\ Ne_2N - S - N - S - CC1_2 - F \\ \parallel & O \end{array}$$

RN 228113-54-0 USPATFULL

CN 3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-biphenyl]-2-yl)-, mixt. with 4-(2,2-difluoro-1,3-benzodioxol-4-yl)-lH-pyrrole-3-carbonitrile (9C1) (CA INDEX NAME)

CM 1

CRN 188425-85-6 CMF C18 H12 C12 N2 O

CM 2

CRN 131341-86-1 CMF C12 H6 F2 N2 O2

RN 228113-56-2 USPATFULL

3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-bipheny1]-2-y1)-, mixt. with 3-chloro-N-[3-chloro-2,6-dinitro-4-(trifluoromethy1)pheny1]-5-(trifluoromethy1)-2-pyridinamine (901) (CA INDEX NAME)

CM 1

CN

CRN 188425-85-6 CMF C18 H12 C12 N2 O

CM 2

CRN 79622-59-6 CMF C13 H4 C12 F6 N4 O4

- IT 188425-85-6D, mixts, containing
  - (synergistic fungicides)
- RN 188425-85-6 USPATFULL
- CN 3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-biphenyl]-2-yl)- (CA INDEX NAME)

L7 ANSWER 39 OF 46 USPATFULL on STN

ACCESSION NUMBER:

2002:39939 USPATFULL

TITLE: INVENTOR(S): Fungicidal mixtures based on amide compounds and azoles Schelberger, Klaus, Gonnheim, GERMANY, FEDERAL REPUBLIC

OF

Scherer, Maria, Landau, GERMANY, FEDERAL REPUBLIC OF Eicken, Karl, Wachenheim, GERMANY, FEDERAL REPUBLIC OF Hampel, Manfred, Neustadt, GERMANY, FEDERAL REPUBLIC OF Ammermann, Eberhard, Heppenheim, GERMANY, FEDERAL REPUBLIC OF

Lorenz, Gisela, Neustadt, GERMANY, FEDERAL REPUBLIC OF Strathmann, Siegfried, Limburgerhof, GERMANY, FEDERAL

REPUBLIC OF

PATENT ASSIGNEE(S): BASF Aktiengesellschaft, Ludwigshafen, GERMANY, FEDERAL REPUBLIC OF (non-U.S. corporation)

NUMBER KIND DATE

PATENT INFORMATION: US 6350765 B1 20020226 W0 9931979 19990701 APPLICATION INFO:: US 2000-581796 20000619 (9) W0 1998-EP8224 19981215

20000619 PCT 371 date DOCUMENT TYPE: Utility

FILE SEGMENT: GRANTED

PRIMARY EXAMINER: Robinson, Allen J. LEGAL REPRESENTATIVE: Keil & Weinkauf

LEGAL REPRESENTATIVE: Re

NUMBER OF CLAIMS: 16

EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 0 Drawing Figure(s); 0 Drawing Page(s)

LINE COUNT:

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Fungicidal mixtures comprise as active components

a) an amide compound of the formula I

A--CO--NR.sup.1R.sup.2 I

in which

A is an aryl group or an aromatic or non-aromatic, 5- or 6-membered heterocycle which has from 1 to 3 hetero atoms which are selected from 0, N and S;

where the aryl group or the heterocycle may or may not have 1, 2 or 3 substituents which are selected, independently of one another, from alkyl, halogen, CHF.sub.2, CF.sub.3, alkoxy, haloalkoxy, alkylthio, alkylsulfinyl and alkylsulfonyl;

R.sup.1 is a hydrogen atom;

R.sup.2 is a phenyl or cycloalkyl group which may or may not have 1, 2 or 3 substituents which are selected, independently of one another, from alkyl, alkenyl, alkynyl, alkoxy, alkenyloxy, alkynyloxy, cycloalkyl, cycloalkenyloxy, penyl and halogen, where the aliphatic and cycloaliphatic radicals may be partially or fully halogenated and/or the cycloaliphatic radicals may be substituted by from 1 to 3 alkyl groups and where the phenyl group may have from 1 to 5 halogen atoms and/or from 1 to 3 substituents which are selected, independently of one another, from alkyl, haloalkyl, alkoxy, haloalkoxy, alkylthio and haloalkylthio, and where the amidic phenyl group may or may not be substituted by one or more alkyl groups and/or may have a hetero atom selected from 0 and S. and

b) an azole derivative II

in a synergistically effective amount.

### CAS INDEXING IS AVAILABLE FOR THIS PATENT.

- SUMM . . which further active ingredients against harmful fungi or other pests, such as insects, arachnids or nematodes, or else herbicidal or growth-regulating active ingredients or fertilizers can be admixed.
- SUMM They are especially important for controlling a large number of fungi in a variety of crop plants, such as cotton, vegetable species (e.g. cucumbers, beans, tomatoes, potatoes and cucurbits), barley, grass, oats, bananas, coffee, maize, fruit species, . . .
- SUMM . . II or of the mixtures of the compounds I and II is effected by spraying or dusting the seeds, the plants or the soils before or after sowing of the plants, or before or after plant emergence.
- SUMM . . . I or II, the mixtures, or the corresponding formulations, are applied by treating the harmful fungi, their habitat, or the plants, seeds, soils, areas, materials or spaces to be kept free from them with a fungicidally effective amount of the mixture, . .
- DETD α corresponds to the fungal infection of the treated plants in % and
- DETD  $\beta$  corresponds to the fungal infection of the untreated (control) plants in %
- DETD An efficacy of 0 means that the infection level of the treated plants corresponds to that of the untreated control plants; an efficacy of 100 means that the treated plants were not infected.
- CLM What is claimed is:
- A method for controlling harmful fungi, which comprises treating the fungi, their habitat, or materials, plants, seeds, soils,

areas or spaces to be protected against fungal attack with an effective amount of the composition defined in. . .

- IT 228113-20-0 228113-21-1 228113-24-4 228113-26-6 228113-27-7 228113-28-8 228113-29-9 228113-30-2 228113-31-3 228113-32-4 228113-33-5 228113-34-6 (synergistic fungicide)
- 60207-90-1D, Propiconazole, mixts. with amides 67747-09-5D, Prochloraz, mixts. with amides 68694-11-1D, Triflumizol, mixts. with amides 76674-21-0D, Flutriafol, mixts. with amides 79983-71-4D, Hexaconazole, mixts, with amides 83657-24-3D, Diniconazole, mixts, with amides 85509-19-9D, Flusilazol, mixts, with amides 88671-89-0D, Myclobutanil, mixts. with amides 94361-06-5D, Cyproconazole, mixts. with amides 107534-96-3D, Tebuconazole, mixts. with amides 112281-77-3D, Tetraconazole, mixts. with amides 114369-43-6D, Fenbuconazole, mixts. with amides 116255-48-2D, Bromuconazole, mixts. with amides 119446-68-3D, Difenoconazole, mixts. with amides 119899-14-8D, mixts. 125116-23-6D, Metconazole, mixts. with amides with azoles 133855-98-8D, Epoxiconazole, mixts. with amides 136426-54-5D, Fluquinconazole, mixts. with amides 149708-54-3D, mixts. with azoles 188425-85-6D, mixts. with azoles
- (synergistic fungicides) IT 228113-24-4 228113-27-7 228113-29-9 228113-32-4 228113-34-6
- (synergistic fungicide)
- RN 228113-24-4 USPATFULL
- CN 3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-biphenyl]-2-yl)-, mixt. with rel-1-[[(2R,3S)-3-(2-chlorophenyl)-2-(4-fluorophenyl)-2-oxiranyl]methyl]-1H-1,2,4-triazole (CA INDEX NAME)

CM

CRN 188425-85-6 CMF C18 H12 C12 N2 O

CM 2

CRN 133855-98-8 CMF C17 H13 C1 F N3 O

Relative stereochemistry.

RN 228113-27-7 USPATFULL

CN 3-Pyridinearboxamide, 2-chloro-N-(4'-chloro[1,1'-biphenyl]-2-yl)-, mixt. with 3-(2,4-dichlorophenyl)-6-fluoro-2-(1H-1,2,4-triazol-1-yl)-4(3H)quinazolione (9C1) (CA INDEX NAME)

CM

CRN 188425-85-6 CMF C18 H12 C12 N2 O

CM 2

CRN 136426-54-5 CMF C16 H8 C12 F N5 O

RN 228113-29-9 USPATFULL

CN 3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-biphenyl]-2-yl)-, mixt.
 with 1-[[bis(4-fluorophenyl)methylsilyl]methyl]-1H-1,2,4-triazole (9C1)
 (CA INDEX NAME)

CM 1

CRN 188425-85-6 CMF C18 H12 C12 N2 O

CM 2

CRN 85509-19-9 CMF C16 H15 F2 N3 Si

RN 228113-32-4 USPATFULL CN 3-Pvridinecarboxamide,

3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-biphenyl]-2-yl)-, mixt. with 1-[[2-(2,4-dichlorophenyl)-4-propyl-1,3-dioxolan-2-yl]methyl]-1H-1,2,4-triazole (9C1) (CA INDEX NAME)

CM 1

CRN 188425-85-6 CMF C18 H12 C12 N2 O

CM :

CRN 60207-90-1

CMF C15 H17 C12 N3 O2

- RN 228113-34-6 USPATFULL
- CN 3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-biphenyl]-2-yl)-, mixt. with α-butyl-α-(4-chlorophenyl)-1H-1,2,4-triazole-1propanenitrile (9CI) (CA INDEX NAME)
  - CM 1
  - CRN 188425-85-6 CMF C18 H12 C12 N2 O

- CM
- CRN 88671-89-0 CMF C15 H17 C1 N4

- IT 188425-85-6D, mixts. with azoles (synergistic fungicides)
- 188425-85-6 USPATFULL RN
- 3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-bipheny1]-2-v1)- (CA CN INDEX NAME)

L7 ANSWER 40 OF 46 USPATFULL on STN

ACCESSION NUMBER: 2002:29393 USPATFULL

TITLE: Fungicide mixtures based on amide compounds and

pyridine derivatives

Schelberger, Klaus, Gonnheim, GERMANY, FEDERAL REPUBLIC INVENTOR(S):

Scherer, Maria, Landau, GERMANY, FEDERAL REPUBLIC OF Eicken, Karl, Wachenheim, GERMANY, FEDERAL REPUBLIC OF

Hampel, Manfred, Neustadt, GERMANY, FEDERAL REPUBLIC OF Ammermann, Eberhard, Heppenheim, GERMANY, FEDERAL

REPUBLIC OF

Lorenz, Gisela, Neustadt, GERMANY, FEDERAL REPUBLIC OF Strathmann, Siegfried, Limburgerhof, GERMANY, FEDERAL REPUBLIC OF

PATENT ASSIGNEE(S): BASF Aktiengesellschaft, Ludwigshafen, GERMANY, FEDERAL

REPUBLIC OF (non-U.S. corporation)

NUMBER KIND DATE PATENT INFORMATION: US 6346538 20020212 B1 WO 9931980 19990701 APPLICATION INFO.: US 2000-581444 20000613 (9) WO 1998-EP8223 19981215 20000613 PCT 371 date

> NUMBER DATE

PRIORITY INFORMATION: DE 1997-19756380 19971218

DOCUMENT TYPE: Utility FILE SEGMENT: GRANTED

PRIMARY EXAMINER: Robinson, Allen J. LEGAL REPRESENTATIVE: Keil & Weinkauf

NUMBER OF CLAIMS: 19

EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 0 Drawing Figure(s); 0 Drawing Page(s) 892

LINE COUNT:

AB

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

Fungicidal mixtures comprise as active components

a) an amide compound of the formula I

A--CO--NR.sup.1R.sup.2 I

in which A, R.sup.1 and R.sup.2 are as defined in the description, and

b) compounds of the formula II, their N-oxide or one of their salts ##STR1##

where the substituents R.sup.12 to R.sup.18 are as defined in the description,

c) compounds of the formula III ##STR2##

where the substituents X.sup.1 to X.sup.5 and R.sup.19 to R.sup.22 are as defined in the description,

in a synergistically effective amount.

## CAS INDEXING IS AVAILABLE FOR THIS PATENT.

- SUMM . . . which further active ingredients against harmful fungi or other pests, such as insects, arachnids or nematodes, or else herbicidal or growth-regulating active ingredients or fertilizers can be admixed.
- SUMM They are especially important for controlling a large number of fungi in a variety of crop plants, such as cotton, vegetable species (eg. cucumbers, beans, tomatoes, potatoes and cucurbits), barley, grass, oats, bananas, coffee, maize, fruit species, . . . .
- SUMM . . . of the mixtures of the compounds I and II and/or III is effected by spraying or dusting the seeds, the plants or the soils before or after sowing of the plants, or before or after plant emergence.
- SUMM . II and/or III, the mixtures, or the corresponding formulations, are applied by treating the harmful fungi, their habitat, or the plants, seeds, soils, areas, materials or spaces to be kept free
- from them with a fungicidally effective amount of the mixture,. . . DETD  $\alpha$  corresponds to the fungal infection of the treated
- plants in % and DETD  $\;\;\beta$  corresponds to the fungal infection of the untreated (control)
- plants in %
  DETD An efficacy of 0 means that the infection level of the treated plants corresponds to that of the untreated control

plants; an efficacy of 100 means that the treated plants were not infected.

- . . . dried on, the leaves were dusted with spores of powdery mildew of wheat (Erysiphe graminis forms specialis tritici). The test
- plants were subsequently kept in a greenhouse at 20-24° C. and 60-90% relative atmospheric humidity. After 7 days, the extent of. . . .
- CLM What is claimed is:

DETD

- 13. A method for controlling harmful fungi, which comprises treating the fungi, their habitat, or materials, plants, seeds, soils, areas or spaces to be protected against fungal attack with an effective amount of the composition defined in. . .
- CLM What is claimed is:

  16. A method for controlling harmful fungi, which comprises treating the fungi, their habitat, or materials, plants, seeds, soils, areas or spaces to be protected against fungal attack with an effective amount of the composition defined in.
- IT 228099-28-3 228099-30-7 228099-32-9 228099-34-1
- (synergistic fungicide)
- IT 11989-14-8D, mixts. containing 149708-54-3D, mixts. containing 188425-85-6D, mixts. containing (synergistic fungicides)
- IT 228099-30-7 228099-34-1
- (synergistic fungicide)
- RN 228099-30-7 USPATFULL
- CN 3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-bipheny1]-2-y1)-, mixt. with 5,7-dichloro-4-(4-fluorophenoxy)quinoline (9CI) (CA INDEX NAME)

CRN 188425-85-6 CMF C18 H12 C12 N2 O

CM

CRN 124495-18-7 CMF C15 H8 C12 F N O

RN 228099-34-1 USPATFULL

CN 3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-biphenyl]-2-yl)-, mixt. with N-[(ethoxyamino)[2-fluoro-6-(trifluoromethyl)phenyl]methylene]-4-methoxybenzeneacetamide (901) (CA INDEX NAME)

CM 1

CRN 188425-85-6 CMF C18 H12 C12 N2 O

CM :

CRN 180408-18-8

- IT 188425-85-6D, mixts. containing
- (synergistic fungicides)
- RN 188425-85-6 USPATFULL
- CN 3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-biphenyl]-2-yl)- (CA INDEX NAME)

L7 ANSWER 41 OF 46 USPATFULL on STN

ACCESSION NUMBER: 2001:112356 USPATFULL

TITLE: Process and agents for controlling harmful fungi

INVENTOR(S): Wagner, Oliver, Ludwigshafen, Germany, Federal Republic of

Eicken, Karl, Wachenheim, Germany, Federal Republic of Ammermann, Eberhard, Heppenheim, Germany, Federal

Republic of Lorenz, Gisela, Hambach, Germany, Federal Republic of

Strathmann, Siegfried, Limburgerhof, Germany, Federal

NUMBER

Republic of Kohle, Harald, Bobenheim, Germany, Federal Republic of Retzlaff, Gunter, Romerberg, Germany, Federal Republic

PATENT ASSIGNEE(S): BASF Aktiengesellschaft, Ludwigshafen, Germany, Federal

KIND

Republic of (non-U.S. corporation) DATE

PATENT INFORMATION:	US 6262091 B1	20010717	
	WO 9739628	19971030	
APPLICATION INFO.:	US 1998-171523	19981021	(9)
	WO 1997-EP2036	19970422	
		19981021	PCT 371 date
		19981021	PCT 102(e) date
	NUMBER	DATE	

PRIORITY INFORMATION: DE 1996-19615977 19960422 DOCUMENT TYPE: Utility

FILE SEGMENT: GRANTED PRIMARY EXAMINER: Pak, John LEGAL REPRESENTATIVE: Keil & Weinkauf NUMBER OF CLAIMS: 19 EXEMPLARY CLAIM: 1 LINE COUNT: 943

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Compositions for controlling harmful fungi, containing in a solid or liquid carrier

- a) at least one p-hydroxyaniline derivative of the formula I ##STR1##
- b) at least one amide compound of the formula II

A--CO--NR.sup.8 --R.sup.9 (II)

where the substituents have the meanings indicated in the description;

and methods of controlling harmful fungi using compositions of this type are described.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

- SUMM . . . invention also relates to a method of controlling harmful fungi, which comprises treating the fungi, their habitat or the materials, plants, seeds, soils, surfaces or spaces to be protected from fungal attack with a composition as defined above, it being possible. . . .
- SUMM Normally, the plants are sprayed or dusted with the active compounds or the seeds of the plants are treated with the
- active compounds.

  SUMM . . . fungi, in particular against Botrytis. In some cases they are systemically active (i.e. they can be absorbed by the treated plants without loss of action and, if appropriate, transported in the plants) and can be employed as foliar and soil fungicides.
- SUMM They are of particular importance for the control of a multiplicity of fungi on various crop plants such as wheat, rye, barley, vines, rice, corn, grass, cotton, soybeans, coffee, sugar cane, votes, fruits and decorative plants and vegetable plants such as cucumbers, beans and cucurbits, and on the seeds of these plants.
- SUMM The compositions are applied by treating the fungi or the seeds, plants, materials or the soil to be protected from fungal attack with a fungicidally active amount of the active compounds.
- SUMM Application is carried out before or after the infection of the materials, plants or seeds by the fungi.
- SUMM The compositions are especially suitable for controlling the following plant diseases:
- SUMM Fusarium and Verticillium species on various plants,
- SUMM . . . the application form as fungicides, the compositions according to the invention can also contain other active compounds, e.g. herbicides, insecticides, growth regulators, fungicides or alternatively fertilizers.
- DETD ... 80% of active compound and 20% of emulsifier in the dry matter. After the spray coating had dried on, the plants were sprayed with a conidia suspension of the fungus Botrytis cinerea and placed in a chamber with high atmospheric humidity at 22 to 24°C. After 5 days, the disease had developed on the untreated control plants so severely that the resulting leaf necrosis covered the greater part of the leaves (attack 100%).
- CLM What is claimed is:

  11. A method of controlling harmful fungi, which comprises treating the fungi, their habitat or the materials, plants, seeds, soils, surfaces or spaces to be protected from fungal attack with the composition defined in claim 1, wherein components.

- 149708-54-3D, mixts. with p-hydroxyaniline derivs. 188425-85-6D , mixts. with p-hydroxyaniline derivs. (synergistic fungicidal mixts.)
- 188425-85-6D, mixts. with p-hydroxyaniline derivs.

(synergistic fungicidal mixts.)

RN 188425-85-6 USPATFULL

3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-biphenyl]-2-yl)- (CA INDEX NAME)

L7 ANSWER 42 OF 46 USPATFULL on STN

ACCESSION NUMBER:

2001:1743 USPATFULL

TITLE:

Harmful fungi control with an active substance

inhibiting respiration by inhibiting the cytochrome complex III, combined with an amide

INVENTOR(S):

Bayer, Herbert, Mannheim, Germany, Federal Republic of Sauter, Hubert, Mannheim, Germany, Federal Republic of Kohle, Harald, Bobenheim, Germany, Federal Republic of

Retzlaff, Gunter, Romerberg, Germany, Federal Republic

Ammermann, Eberhard, Heppenheim, Germany, Federal

Republic of Lorenz, Gisela, Hambach, Germany, Federal Republic of Strathmann, Siegfried, Limburgerhof, Germany, Federal

Republic of Eicken, Karl, Wachenheim, Germany, Federal Republic of

DATE

19980323 PCT 102(e) date

BASF Aktiengesellschaft, Ludwigshafen, Germany, Federal Republic of (non-U.S. corporation)

KIND

PATENT ASSIGNEE(S):

PATENT INFORMATION:	US 6169056	B1	20010102	
	WO 9710716		19970327	
APPLICATION INFO.:	US 1998-43513		19980323	(9)
	WO 1996-EP4151		19960923	
			19980323	PCT 371 da

NUMBER

NUMBER DATE

PRIORITY INFORMATION: DE 1995-19535366 19950922 DOCUMENT TYPE: Utility

FILE SEGMENT: Granted PRIMARY EXAMINER: Dees, Jose' G. ASSISTANT EXAMINER: Pryor, Alton LEGAL REPRESENTATIVE: Keil & Weinkauf NUMBER OF CLAIMS:

EXEMPLARY CLAIM: LINE COUNT: 1242

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

Compositions for controlling harmful fungi which comprise, as active

ingredients, at least one compound which inhibits respiration on the cytochrome complex III and at least one amide compound of the formula  ${\tt II}$ 

A--CO--NR.sup.1 R.sup.2

where A, R.sup.1 and R.sup.2 have the meanings given in the description. The compositions according to the invention can be used, in particular, for controlling botrytis.

- CAS INDEXING IS AVAILABLE FOR THIS PATENT.
- SUMM . . . invention also relates to a method of controlling harmful fungi, which comprises treating the fungi, their environment, or the materials, plants, seeds, soils, areas or spaces to be protected against fungal infection, with a composition as defined above, it being possible. . .
- SUMM Normally, the plants are sprayed or dusted with the active ingredients, or the seeds of the plants are treated with the active ingredients.
- SUMM . . . phytopathogenic fungi, in particular against botrytis. some of them act systemically (ie. they can be taken up by the treated plants without losing their activity and, if appropriate, translocated within the plant) and can be employed as foliarand soil-acting functiones.
- SUMM They are particularly important for controlling a large number of fungi in a variety of crop plants such as wheat, rye, barley, oats, rice, maize, grass, cotton, soybeans, coffee, sugar cane, grapevine, fruit species, ornamentals and vegetable species such as cucumbers, beans and cucurbits, and on the seeds of these plants.
- SUMM The compositions are applied by treating the fungi, or the seeds, plants, materials or the soil to be protected against fungal infection, with a fungicidally active amount of the active ingredients.
- SUMM Application is effected before or after infection of the materials, plants or seeds with the fungi.
- SUMM Specifically, the compositions are suitable for controlling the following plant diseases:
- SUMM Fusarium and Verticillium species in a variety of plants, Alternaria species in vegetables and fruit,
- SUMM . . . the use form as fungicides, the compositions according to the invention can also comprise other active ingredients, eg. herbicides, insecticides, growth regulators, fungicides or else fertilizers.
- DETD . . . 80% of active ingredient and 20% of emulsifier in the dry matter. After the spray coating had dried on, the plants were sprayed with a conidia suspension of the fungus Botrytis cinerea and placed into a chamber at 22-24° C. and high atmospheric humidity. After 5 days, the untreated control plants had developed such an extent of the disease that the leaf necroses formed covered most of the leaves (disease level.

  CLM What is claimed is:
- IT 189001-14-7 189001-15-8 189001-16-9 189001-19-2 189001-21-6 189001-23-8 189001-25-0 189001-27-2 (synergistic agrochem. fungicide)
- II 139751-54-5D, mixts. with amides 144167-04-4D, mixts. with amides 145451-07-6D, mixts. with amides 149708-54-3D, mixts. with cytochrome complex III inhibitors 172524-76-4D, mixts. with amides 172719-88-9D, mixts. with amides 188425-85-6D, mixts. with cytochrome complex III inhibitors

(synergistic agrochem. fungicides)

IT 189001-19-2 189001-21-6 189001-23-8 189001-25-0 189001-27-2

(synergistic agrochem. fungicide)

RN 189001-19-2 USPATFULL

CN 3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-biphenyl]-2-yl)-, mixt. with 2-[[[1-4-chlorophenyl)ethylidene]amino]oxy]methyl]-α-(methoxylimino)-N-methylbenzeneacetamide (9CI) (CA INDEX NAME)

CM 1

CRN 188425-85-6 CMF C18 H12 C12 N2 O

CM

CRN 139751-54-5 CMF C19 H20 C1 N3 O3

RN 189001-21-6 USPATFULL CN 3-Pvridinecarboxamide,

3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-biphenyl]-2-yl)-, mixt. with α-(methoxyimino)-N-methyl-2-(4-methyl-5-phenyl-2,7-dioxa-3,6-diazaocta-3,5-dien-1-yl)benzeneacetamide (9CI) (CA INDEX NAME)

CM 1

CRN 188425-85-6

CMF C18 H12 C12 N2 O

CM :

CRN 172719-88-9 CMF C21 H24 N4 O4

RN 189001-23-8 USPATFULL

CN Benzeneacetic acid, a-(methoxyimino)-2-[(2-methylphenoxy)methyl]-, methyl ester, mixt. with 2-chloro-N-(4'-chloro[1,1'-biphenyl]-2-yl)-3pyridinecarboxamide (9CI) (CA INDEX NAME)

CM

CRN 188425-85-6 CMF C18 H12 C12 N2 O

CM 2

CRN 144167-04-4 CMF C18 H19 N O4

RN 189001-25-0 USPATFULL

CN 3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-bipheny1]-2-y1)-, mixt. with 2-[(2,5-dimethylphenoxy) methyl)-a-(methoxyimino)-Nmethylbenzeneacetamide (9C1) (CA INDEX NAME)

CM 1

CRN 188425-85-6

CMF C18 H12 C12 N2 O

CM 2

CRN 145451-07-6 CMF C19 H22 N2 O3

RN 189001-27-2 USPATFULL

CN 3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-biphenyl]-2-yl)-, mixt. with 2-[5-(4-fluorophenyl)-4-methyl-2,7-dioxa-3,6-diazaocta-3,5-dien-1-yl]-a-(methoxyimino)-N-methylbenzeneacetamide (9CI) (CA INDEX NAME)

CM 1

CRN 188425-85-6 CMF C18 H12 C12 N2 O

CM 2

CRN 172524-76-4 CMF C21 H23 F N4 O4

188425-85-6D, mixts, with cytochrome complex III inhibitors

(synergistic agrochem. fungicides)

RN 188425-85-6 USPATFULL

CN 3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-biphenyl]-2-yl)- (CA INDEX NAME)

L7 ANSWER 43 OF 46 USPATFULL on STN

ACCESSION NUMBER:

TITLE: INVENTOR(S): 2000:168039 USPATFULL

Fungicidal mixtures Muller, Bernd, Frankenthal, Germany, Federal Republic

Sauter, Hubert, Mannheim, Germany, Federal Republic of

Ammermann, Eberhard, Heppenheim, Germany, Federal Republic of Lorenz, Gisela, Neustadt, Germany, Federal Republic of

Strathmann, Siegfried, Limburgerhof, Germany, Federal Republic of

Scherer, Maria, Landau, Germany, Federal Republic of Schelberger, Klaus, Gonnheim, Germany, Federal Republic

Leyendecker, Joachim, Ladenburg, Germany, Federal

Republic of

NUMBER

PATENT ASSIGNEE(S): BASF Aktiengesellschaft, Ludwigshafen, Germany, Federal Republic of (non-U.S. corporation)

US 6159992 PATENT INFORMATION: 20001212 WO 9808385 19980305 APPLICATION INFO .: US 1999-242715 19990222 (9) WO 1997-EP4541 19970821 19990222 PCT 371 date

> 19990222 PCT 102(e) date NUMBER DATE

KIND

PRIORITY INFORMATION: DE 1996-19635079 19960830 DOCUMENT TYPE: Utility FILE SEGMENT: Granted

PRIMARY EXAMINER: Robinson, Allen J. LEGAL REPRESENTATIVE: Keil & Weinkauf

NUMBER OF CLAIMS: 13
EXEMPLARY CLAIM: 1
LINE COUNT: 433

in % and

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to a fungicidal mixture which comprises

a) a carbamate of the formula I #\$STR1## where X is CH and N, n is 0, 1 or 2 and R is halogen, C.sub.1 -C.sub.4 -alkyl and C.sub.1 -C.sub.4 -haloalkyl, it being possible for the radicals R to be different when n is 2, or a salt or adduct thereof, and

b) an anilide of the formula II ##STR2## where R.sup.1 is fluorine or chlorine, or a salt or adduct thereof, in a synergistically active amount.

# CAS INDEXING IS AVAILABLE FOR THIS PATENT.

- SUMM . . . active ingredients against harmful fungi or against other pests such as insects, arachnids or nematodes, or else herbicidally active ingredients, growth regulators or fertilizers, may be admixed.
- SUMM They are especially important for controlling a large number of fungi on a variety of crop plants such as cotton, vegetables (eq. cucumbers, beans, tomatoes, potatoes and cucurbits), barley, grass, oats, bananas, coffee, maize, fruit species, rice, . . .
- SUMM . . . II, or of the mixtures of the compounds I and II, is effected by spraying or dusting the seeds, the plants or the soils before or after sowing the plants or before or after plant emergence.
- SUMM . . . or II or the mixtures or the corresponding formulations are applied by treating the harmful fungi, their environment, or the plants, seeds, soils, areas, materials or spaces to be kept free from them with a fungicidally active amount of the mixture, . . .
- DETD . . . active ingredient and 20% by weight of emulsifier in the dry matter. After the spray coating had dried on, the plants were sprayed with a conidia suspension of the fungus Botrytis cinerea and placed into a chamber at high atmospheric humidity and 22-24° C. After 5 days, the disease had developed to such an extent on the untreated control plants that the resulting foliar necroses covered most of the leaves.
- DETD  $\alpha$  is the level of fungal infection of the treated plants
- DETD  $\beta$  is the level of fungal infection of the untreated (control) plants in %
- DETD An efficacy of 0 means that the infection level of the treated plants corresponds to that of the untreated control plants; when the efficacy is 100, the treated plants are free from infection.
- DETD Leaves of plants cv. "Große Fleischtomate" in pots were sprayed to run-off with an aqueous suspension made with a stock solution of 10%. . . and 27% of emulsifier. The next day, the leaves were infected with an aqueous zoospore suspension of Phytophthora infestans. The plants were subsequently placed into a water-vapor-saturated chamber at from 16 to 18° C. After 6 days, the tomato blight had developed on the untreated, but infected, control plants to such an extent that it was possible to determine the disease level visually in %.
- DETD . . . a stock solution of 10% of active ingredient, 63% of cyclohexanone and 27% of emulsifier. The next day, the treated plants were inoculated with a spore suspension of Botrytis cinerea containing 1.7+10.sup.6 spores/ml in a 2% strength aqueous Biomalz solution. The test plants were then placed into a controlled-environment cabinet at 22 to 24° C. and high

atmospheric humidity. After 5 days, the. . .

What is claimed is:

5. A method for controlling harmful fungi, which comprises treating the harmful fungi, their environment, or plants, seeds, soils, areas, materials or spaces to be kept free from said fungi with synergistically effective amounts of the carbamate. . .

IT 203924-02-1 203924-03-2 203924-04-3 203924-05-4

(synergistic fungicidal mixture)

T 149708-54-3 188425-85-6

(synergistic fungicides)

IT 203924-02-1 203924-05-4

(synergistic fungicidal mixture)

RN 203924-02-1 USPATFULL

CN Carbamic acid, N-[2-[[[1-(4-chlorophenyl)-1H-pyrazol-3-

yl]oxy]methyl]phenyl]-N-methoxy-, methyl ester, mixt. with 2-chloro-N-(4'-chloro[1,1'-biphenyl]-2-yl)-3-pyridinecarboxamide (CA INDEX NAME)

CM

1

CLM

CRN 188425-85-6 CMF C18 H12 C12 N2 O

CM

CRN 175013-18-0 CMF C19 H18 C1 N3 O4

RN 203924-05-4 USPATFULL

CN Carbamic acid, methoxy[2-[[[1-(4-methylphenyl)-]H-pyrazol-3-yl]oxy]methyl]phenyl]-, methyl ester, mixt. with 2-chloro-N-(4'-chloro[1,1'-biphenyl]-2-yl)-3-pyridinecarboxamide (9CI) (CA INDEX NAME)

CM 1

CRN 188425-85-6

CMF C18 H12 C12 N2 O

CM 2

CRN 175013-22-6 CMF C20 H21 N3 O4

188425-85-6

(synergistic fungicides)

188425-85-6 USPATFULL RN

CN 3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-biphenyl]-2-yl)- (CA INDEX NAME)

L7 ANSWER 44 OF 46 USPATFULL on STN

ACCESSION NUMBER: 2000:150165 USPATFULL

TITLE: INVENTOR(S):

Process and agent for controlling harmful fungi

Eicken, Karl, Wachenheim, Germany, Federal Republic of Ammermann, Eberhard, Heppenheim, Germany, Federal

Republic of Strathmann, Siegfried, Limburgerhof, Germany, Federal

Republic of

Lorenz, Gisela, Hambach, Germany, Federal Republic of Kohle, Harald, Bobenheim, Germany, Federal Republic of Retzlaff, Gunter, Romerberg, Germany, Federal Republic of

PATENT ASSIGNEE(S): BASF Aktiengesellschaft, Ludwigshafen, Germany, Federal Republic of (non-U.S. corporation)

NUMBER KIND DATE

19981021 PCT 371 date 19981021 PCT 102(e) date

NUMBER DATE

PRIORITY INFORMATION: DE 1996-19615976 19960422

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted

FILE SEGMENT: Granted
PRIMARY EXAMINER: Robinson, Allen J.

PRIMARY EXAMINER: Robinson, Allen J. LEGAL REPRESENTATIVE: Keil & Weinkauf

NUMBER OF CLAIMS: 15 EXEMPLARY CLAIM: 1

LINE COUNT: 759

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Compositions for controlling harmful fungi, containing in a solid or liquid carrier pyridaben of the formula: #\$STR1## or fenpyroximate of the formula: #\$STR2## or tebufenpyrad of the formula: #\$STR3## and at least one amide compound of the following formula I:

A--CO--NR.sup.1 R.sup.2 (I

where the substituents have the meanings indicated in the description, and methods for controlling harmful fungi using compositions of this type are described.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

SUMM . . . invention also relates to a method of controlling harmful fungi, which comprises treating the fungi, their habitat or the materials, plants, seeds, soils, surfaces or spaces to be

protected from fungal attack with a composition according to the invention, it being.

SUMM Normally, the plants are sprayed or dusted with the active

compounds or the seeds of the plants are treated with the active compounds.

SUMM . . . fungi, in particular against Botrytis. In some cases they are systemically active (ie. they can be absorbed by the treated plant without loss of action and, if appropriate, transported in

the plant) and can be employed as foliar and soil fungicides.

SUMN They are of particular importance for the control of a multiplicity of fungi on various crop plants such as wheat, rye, barley, oats, rice, corn, grass, cotton, sybeans, coffee, sugar cane, vines, fruit and decorative plants and vegetable plants such as

cucumbers, beans and cucurbits, and on the seeds of these plants .

SUMM The compositions are applied by treating the fungi or the seeds, plants, materials or the soil to be protected from fungal attack with a fungicidally active amount of the active compounds.

SUMM Application is carried out before or after the infection of the materials, plants or seeds by the fungi.

SUMM The compositions are especially suitable for controlling the following plant diseases:

SUMM Fusarium and Verticillium species on various plants,

SUMM . . . the application form as fungicides, the compositions according to the invention can also contain other active compounds, eg. herbicides, insecticides, growth regulators, fungicides or alternatively fertilizers.

DETD . . . 80% of active compound and 20% of emulsifier in the dry matter.

After the spray coating had dried on, the plants were sprayed

with a conidia suspension of the fungus Botrytis cinerea and placed in a chamber with high atmospheric humidity at 22-24° C. After 5 days, the disease had developed on the untreated control plants so severely that the resulting leaf necroses covered the greater part of the leaves (attack 83%).

- CLM What is claimed is:
  - 9. A method for controlling harmful fungi, which comprises treating the fungi, their habitat or materials, plants, seeds, soils, surfaces or spaces which are to be protected from fungal attack with a funcicidally effective amount of the.
- IT 96489-71-3D, Pyridaben, mixts. with amides 119168-77-3D, Tebufenpyrad, mixts. with amides 119899-14-8D, mixts. containing 149708-54-3D, mixts. containing 188425-85-6D, mixts. containing (synergistic fungicidal composition)
- IT 188425-85-6D, mixts. containing
- (synergistic fungicidal composition)
- RN 188425-85-6 USPATFULL
- CN 3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-biphenyl]-2-yl)- (CA INDEX NAME)

L7 ANSWER 45 OF 46 USPATFULL on STN

ACCESSION NUMBER: TITLE: 2000:134891 USPATFULL

INVENTOR(S):

Fungicidal agents and method Eicken, Karl, Wachenheim, Germany, Federal Republic of

Kohle, Harald, Bobenheim, Germany, Federal Republic of Retzlaff, Gunter, Romerberg, Germany, Federal Republic

of

Ammermann, Eberhard, Heppenheim, Germany, Federal Republic of

Lorenz, Gisela, Hambach, Germany, Federal Republic of Strathmann, Siegfried, Limburgerhof, Germany, Federal

KIND DATE

Republic of

PATENT ASSIGNEE(S): BASF Aktiengesellschaft, Ludwigshafen, Germany, Federal

Republic of (non-U.S. corporation)

PATENT INFORMATION: US 6130224 20001010 w0 9708952 19970313 APPLICATION INFO:: US 1998-29629 19980304 (9) W0 1996-EP3861 19960905 19980304 PCT 102(e) date 19980304 PCT 102(e) date

NUMBER

19980304 PCT 102(e)

PRIORITY INFORMATION: DE 1995-19532752 19950905
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
RObinson, Allen J.

LEGAL REPRESENTATIVE: Keil & Weinkaug

NUMBER OF CLAIMS: 16 EXEMPLARY CLAIM: 1

LINE COUNT: 836

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to compositions for controlling harmful fungi which comprise, as active ingredients, fenazaquin and at least one

amide compound of the formula I

A--CO--NR.sup.1 R.sup.2

Τ.

where A, R.sup.1 and R.sup.2 have the meanings given in the description. The compositions according to the invention are particularly useful for controlling botrvtis.

### CAS INDEXING IS AVAILABLE FOR THIS PATENT.

SUMM . . . invention also relates to a method of controlling harmful fungi, which comprises treating the fungi, their environment, or the materials, plants, seeds, soils, areas of spaces to be protected against fungal infection, with a composition as claimed in any of claims. . .

SUMM Normally, the plants are sprayed or dusted with the active ingredients, or the seeds of the plants are treated with the active ingredients.

SUMM . . . fungi, in particular against botrytis. In some cases, they act systemically (ie. they can be taken up by the treated plant without loss of efficacy and, if appropriate, translocated within the plant) and can be employed as foliar- and soil-acting fundicides.

SUMM They are especially important for controlling a large number of fungi in a variety of crop plants such as wheat, rye, barley, oats, rice, maize, grass, cotton, soya, coffee, sugar cane, grapevines, fruit species, ornamentals and vegetable species such as cucumbers, beans and cucumbits, and the seeds of these plants.

SUMM The compositions are applied by treating the fungi, or the seeds, plants, materials or the soil to be protected against fungal infection, with a fungicidally active amount of the active ingredients.

SUMM Application is effected before or after infection of the materials, plants or seeds by the fungi.

SUMM Specifically, the compositions are suitable for controlling the following plant diseases:

SUMM Fusarium and Verticillium species in a variety of plants.

SUMM . the use form as fungicides, the compositions according to the invention can also comprise other active ingredients, eg. herbicides, insecticides, growth regulators, fungicides or else fertilizers. A mixture with fungicides in many cases results in a widened fungicidal spectrum of action.

DETD . . . of emulsifier in the dry matter after 4-5 leaves had developed properly. After the spray coating had dried on, the plants were sprayed with a conidia suspension of the fungus Botrytis cinerea and placed into a chamber at 22-24° C. at high atmospheric humidity. After 5 days, the disease on the untreated control plants had developed to such an extent that the foliar necroses formed covered most of the leaf area (disease level 83%).

CLM What is claimed is:
10. A method of controlling harmful fungi, which comprises treating the fungi, their environment, or materials, plants, seeds, soils, areas or spaces to be protected against fungal infection, with a fungicidally effective amount of a composition defined.

IT 188425-82-3 188425-86-7 188425-89-0

(synergistic fungicidal mixture)

IT 188425-86-7

(synergistic fungicidal mixture)

RN 188425-86-7 USPATFULL

3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-bipheny1]-2-y1)-, mixt. with 4-[2-[4-(1,1-dimethylethyl)phenyl]ethoxylquinazoline (9CI) (CA INDEX NAME)

CM 1

CN

CRN 188425-85-6 CMF C18 H12 C12 N2 O

CM :

CRN 120928-09-8 CMF C20 H22 N2 O

L7 ANSWER 46 OF 4 ACCESSION NUMBER:

TITLE:

INVENTOR(S):

ANSWER 46 OF 46 USPATFULL on STN

1999:160066 USPATFULL

Heterocyclically substituted biphenylamine derivatives, their preparation and their use as fungicides Eicken, Karl, Wachenheim, Germany, Federal Republic of

Rang, Harald, Altrip, Germany, Federal Republic of Harreus, Albrecht, Ludwigshafen, Germany, Federal Republic of

Gotz, Norbert, Worms, Germany, Federal Republic of Ammermann, Eberhard, Heppenheim, Germany, Federal Republic of

Lorenz, Gisela, Hambach, Germany, Federal Republic of Strathmann, Siegfried, Limburgerhof, Germany, Federal Republic of PATENT ASSIGNEE(S): BASF Aktiengesellschaft, Ludwigshafen, Germany, Federal Republic of (non-U.S. corporation) KIND

DATE

PATENT INFORMATION:	US 5998450	19991207
	WO 9708148	19970306
APPLICATION INFO.:	US 1998-11717	19980217 (9)
	WO 1996-EP3753	19960826
		19980217 PCT 371 date
		19980217 PCT 102(e) date

NUMBER DATE PRIORITY INFORMATION: DE 1995-19531813 19950830

NUMBER

DOCUMENT TYPE: Utility FILE SEGMENT: Granted

PRIMARY EXAMINER: Fan, Jane LEGAL REPRESENTATIVE: Keil & Weinkauf NUMBER OF CLAIMS: 16

EXEMPLARY CLAIM: 1 LINE COUNT: 659

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

Biphenylamides of the general formula I ##STR1## and their salts (A= ##STR2## R.sup.1 =F; R.sup.2 =H, halogen, alkyl, CF.sub.3, alkoxy, alkylthio; R.sup.3 =Cl, CF.sub.3; R.sup.4 =H, CH.sub.3; R.sup.5 =Cl, CH.sub.3, CHF.sub.2, CF.sub.3;

R.sup.6 = CH.sub.3, CHF.sub.2, CF.sub.3), and compositions comprising I, the preparation of I and of the compositions, and of the use of both of them for controlling harmful fungi.

### CAS INDEXING IS AVAILABLE FOR THIS PATENT.

- SUMM . . . salt is immaterial. Salts which are preferred for the purpose of the invention are those which do not damage the plants, areas, materials or spaces to be kept from harmful fungi and which do not adversely affect the activity of the.
- SUMM Normally, the plants are sprayed or dusted with the active ingredients or the seeds of the plants are treated with the active ingredients.
- DETD They are specially important for controlling a large number of fungi on a variety of crop plants such as wheat, rye, barley, oats, rice, maize, lawn, cotton, soya beans, coffee, sugarcane, grapevines, fruit species, ornamentals and vegetable species such as cucumbers, beans and cucurbits, and on the seeds of these plants.
- The compounds are applied by treating the harmful fungi, their DETD environment, or the plants, spaces, areas or materials to be kept free from them, with an effective amount of the active ingredients.
- DETD Application is effected before or after infection of the materials, plants or seeds by the fungi.
- Specifically, the novel compounds are suitable for controlling the DETD following plant diseases:
- . . . and barley, Pyricularia oryzae on rice, Phytophthora infestans DETD on potatoes and tomatoes, Fusarium and Verticillium species on a variety of plants, Plasmopara viticola on grapevines, Alternaria species on vegetables and fruit.
- DETD . . . fungicides, the compositions according to the invention can also be present together with other active ingredients, eg. with herbicides, insecticides, growth regulators, fungicides, or else with fertilizers.
- DETD . . had dried on, the leaves were dusted with oidia (spores) of powdery mildew of wheat (Erysiphe graminis var. tritici). The

plants were subsequently incubated for 7 days at 20-22° C. and a relative atmospheric humidity of 75-80%.

- CLM What is claimed is:
  - 16. A method of controlling harmful fungi, which comprises treating the plants to be kept free from said fungi, with an effective amount of at least one compound of the formula I.
- IT 188731-20-6P 188731-21-7P 188731-22-8P 188731-23-9P
  - 188731-24-0P 188731-25-1P 188731-26-2P 188731-27-3P 188731-28-4P
  - 188731-29-5P 188731-30-8P 188731-31-9P 188731-32-0P 188731-33-1P (preparation of arov1 biphenylylamides as agrochem, and industrial
- fungicides) IT 188731-21-7P
  - (preparation of aroyl biphenylylamides as agrochem. and industrial funcicides)
- RN 188731-21-7 USPATFULL
- CN 3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro-5-fluoro[1,1'-biphenyl]-2-yl)(CA INDEX NAME)

=> d his

(FILE 'HOME' ENTERED AT 16:10:17 ON 08 MAY 2008)

FILE 'REGISTRY' ENTERED AT 16:10:34 ON 08 MAY 2008

- L1 STRUCTURE UPLOADED
- L2 110 S L1 SSS FUL
- FILE 'CAPLUS, USPATFULL' ENTERED AT 16:11:15 ON 08 MAY 2008
- L3 262 S L2
- L4 0 S L3 AND (PLANT 1S GROWTH)
- L5 68 S L3 AND PLANT AND GROWTH
- L6 46 S L3 AND PLANT AND GROWTH AND (REGULATING OR REGULATOR)
- L7 46 S L3 AND PLANT AND (GROWTH (1S) (REGULATING OR REGULATOR))

=> log off hold

SESSION WILL BE HELD FOR 120 MINUTES

STN INTERNATIONAL SESSION SUSPENDED AT 16:20:07 ON 08 MAY 2008

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID: SSPTAKLB1616

#### PASSWORD:

\* \* \* \* \* \* RECONNECTED TO STN INTERNATIONAL \* \* \* \* \*

SESSION RESUMED IN FILE 'CAPLUS, USPATFULL' AT 16:21:51 ON 08 MAY 2008

FILE 'CAPLUS' ENTERED AT 16:21:51 ON 08 MAY 2008 COPYRIGHT (C) 2008 AMERICAN CHEMICAL SOCIETY (ACS) FILE 'USPATFULL' ENTERED AT 16:21:51 ON 08 MAY 2008

CA INDEXING COPYRIGHT (C) 2008 AMERICAN CHEMICAL SOCIETY (ACS)

COST IN U.S. DOLLARS SINCE FILE TOTAL ENTRY SESSION FULL ESTIMATED COST 267.00 445.57

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(FILE 'HOME' ENTERED AT 16:10:17 ON 08 MAY 2008)

FILE 'REGISTRY' ENTERED AT 16:10:34 ON 08 MAY 2008 STRUCTURE UPLOADED

1.2 110 S L1 SSS FUL

FILE 'CAPLUS, USPATFULL' ENTERED AT 16:11:15 ON 08 MAY 2008

L3 262 S L2 L4

0 S L3 AND (PLANT 1S GROWTH)

68 S L3 AND PLANT AND GROWTH

L6 46 S L3 AND PLANT AND GROWTH AND (REGULATING OR REGULATOR)

L7 46 S L3 AND PLANT AND (GROWTH (1S) (REGULATING OR REGULATOR))

=> s 13 and (azoxystrobin or dimoxystrobin or fluoxastrobin or strobilurin or metominostrobin) 130 L3 AND (AZOXYSTROBIN OR DIMOXYSTROBIN OR FLUOXASTROBIN OR STROBI

LURIN OR METOMINOSTROBIN)

=> s 18 and plant and growth and (regulating or regulator) 22 L8 AND PLANT AND GROWTH AND (REGULATING OR REGULATOR)

=> d 19 10-22 ibib abs hitstr kwic

L9 ANSWER 10 OF 22 USPATFULL on STN

ACCESSION NUMBER: 2007:265418 USPATFULL

TITLE: Compositions and methods to add value to plant

products, increasing the commercial quality, resistance to external factors and polyphenol content thereof

INVENTOR(S): Nappa, Alvaro Olivera, Santiago, CHILE

Lorenzini, Felipe Camposano, Santiago, CHILE

Sanhueza, Andres Leschot, Santiago, CHILE

NUMBER KIND DATE PATENT INFORMATION: APPLICATION INFO.: US 2007232495 A1 20071004 US 2007-728267 A1 20070323 (11)

NUMBER DATE PRIORITY INFORMATION: CL 2006-6742006 20060324

DOCUMENT TYPE: Utility FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: CHRISTENSEN, O'CONNOR, JOHNSON, KINDNESS, PLLC, 1420 FIFTH AVENUE, SUITE 2800, SEATTLE, WA, 98101-2347, US

NUMBER OF CLAIMS: 26

EXEMPLARY CLAIM:

NUMBER OF DRAWINGS: 4 Drawing Page(s) LINE COUNT: 2551

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention is related to compositions and methods that naturally protect plant tissues against ultraviolet radiation and

temperature, thus giving protection against sunburn to plants, plant parts, fruits and/or flowers during their development. The invention is also related to compositions and methods to naturally improve the color of plants, plant parts, fruits and/or flowers by inducing the natural synthesis of flavonoids and anthocyanins present in plants. Likewise, the present invention is directed to improving the nutritional value of plants, plant parts, fruits and/or flowers by increasing the normal levels of polyphenolic compounds, especially flavonoids, present therein. Additionally, the present invention is related to compositions and methods that give more resistance to plants, plant parts, fruits and/or flowers against pathogens as bacteria and fungi. Finally, the present invention is related to plants, plant parts, fruits, flowers and/or propagating material treated with the compositions described in the present document.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 188425-85-6D, Boscalid, mixts. with phenolic compds.

(agrochem. compns. comprising phenolic compds. and methods for protecting plant tissues against UV radiation and improving color and polyphenol content of plants and plant parts)

RN 188425-85-6 USPATFULL

CN 3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-biphenyl]-2-yl)- (CA INDEX NAME)

TI Compositions and methods to add value to plant products, increasing the commercial quality, resistance to external factors and polyphenol content thereof

AB The invention is related to compositions and methods that naturally protect plant tissues against ultraviolet radiation and temperature, thus giving protection against sunburn to plants, plant parts, fruits and/or flowers during their development. The invention is also related to compositions and methods to naturally improve the color of plants, plant parts, fruits and/or flowers by inducing the natural synthesis of flavonoids and anthocyanins present in plants. Likewise, the present invention is directed to improving the nutritional value of plants, plant parts, fruits and/or flowers by increasing the normal levels of polyphenolic compounds, especially flavonoids, present therein. Additionally, the present invention is related to compositions and methods that give more resistance to plants, plant parts, fruits and/or flowers against pathogens as bacteria and fungi. Finally, the present invention is related to plants, plant parts, fruits, flowers and/or propagating material treated with the compositions described in the present document.

SUMM The invention is related to compositions and methods that protect against ultraviolet radiation, thus giving protection against sunburn to plants, plant parts, fruits and/or flowers during their development. The invention is also related to compositions and

```
methods to naturally improve the color of plants,
       plant parts, fruits and/or flowers by inducing the natural
       synthesis of flavonoids and anthocyanins present in plants.
       Likewise, the present invention is directed to improving the nutritional
       value of plants, plant parts, fruits and/or flowers
       by increasing the normal levels of polyphenolic compounds, especially
       flavonoids, present therein. Additionally, the present invention is
       related to compositions and methods that give more resistance to
       plants, plant parts, fruits and/or flowers against
       pathogens as bacteria and fungi. Finally, the present invention is
       related to plants, plant parts, fruits, flowers
       and/or propagating material treated with the compositions described in
       the present document.
SUMM
          . . fruit, ranging from a slight discoloration of the natural
       fruit pigment to a severe burn that completely destroys (ulcerates) the
       plant tissue, in the worst case. When sunburn is present in
       produced fruit, either in a slight or maximum degree, the.
SUMM
          . . that in the whole contribute with vitamins, fiber, sugars,
       lipids, antioxidants and the like. One of the antioxidants produced by
       plants in large amounts to protect themselves against oxidative
       damage caused by UV radiation or other environmental aggressions is the
       group. . . flavonoids. Anthocyanins are one subtype of flavonoids.
       They are molecules with red, blue or violet color that are present in
       plant tissues and are responsible for the characteristic colors
       of many ripe fruits. A flavonoid-rich diet helps removing free radicals
       from. . . abovementioned facts, it would very interesting to have a
       way to improve the quality and amount of flavonoids available in
      plant food consumed by humans.
SUMM
       The present invention is directed to compositions and methods to
      decrease the harmful effects of solar radiation on plants,
       plant parts, flowers and fruits, also improving the color
       thereof and, additionally, increasing the nutritional value of
       plants by increasing the natural synthesis of antioxidants. This
      could imply a direct increase of the value and quality of fruit.
SUMM
       . . . of excessive heat and a high dose of UV radiation. In order to
       prevent or decrease sunburn or sun damage, plants,
      plant parts, fruits and/or flowers are sought to be protected
       against the harmful effects of heat and excessive UV radiation. If.
          by spraying water to cool the orchard by evaporation, as explained
       hereinafter. At present, some methods are known to protect
       plants (fruits) against sunburn, which are based in different
       indirect methodologies. Next, known commercial products of the present
       state of the. .
SUMM
       "Raynox®": Their manufacturers define it as a product that is
       applied over the tree (fruits), which is based on UV-absorbing
       plant waxes (carnauba wax). This wax deteriorates with solar
       radiation as time goes by, and due to this reason it is. .
       . . . reaches the tree leaves. This obviously decreases the
SUMM
       efficiency of the photosynthetic processes of the tree, which affects
       their own growth and the growth of its fruits, and
       also the general health of the tree. This clay suspension can also limit
       tree respiration because of stoma blockage. All this effects cause a
       higher general weakness of the plant and/or a decrease of
       fruit quality or amount, both in their color as in their size. In the
       other hand, it is possible that fruit growth causes the clay
       layer to break, thus losing a part of its protective ability, also
       requiring many applications during fruit growth and ripening.
SUMM
       . . . of excessive heat and a high dose of UV radiation. In order to
       prevent or decrease sunburn or sun damage, plants,
      plant parts, fruits and/or flowers are sought to be protected
       against the harmful effects of heat and excessive UV radiation.
       Therefore, . .
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SUMM

. . structures have an even higher ability to absorb UV radiation and play even more important roles in the structure of plant cells, mainly as part of the hemicellulose and lignin structure of plant cell walls. The cinnamic acid derivatives that mainly play this structural and UV absorbing functions as part of lignin in plants are ferulic acid derivatives, caffeic acid derivatives and sinapic acid derivatives.

. . . development and/or stressing the tree by decreasing water supply, which affects the final color of the fruit, but limits its
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supply, which affects the final color of the fruit, but limits its growth (size) and makes the treatment not always satisfactory.

SUMM . . . past, Alar (daminozide) was used to increase color in fruit. Daminozide was used in some crops, mainly apples and ornamental plants, to improve the balance between vegetative growth and fruit production, improve fruit quality and synchronize fruit ripening. In 1989, a by-product of daminozide, called UDMH (unsymmetrical dimethylhydrazine). . . was forbidden for fruits or food products in many countries, allowing it to be sold only for use in ornamental plants.

SUMM . . . the extra contribution of phosphite anion has some drawbacks such as the contribution of a disproportionate phosphorus amount to the plant in forms other than phosphate and possible environmental problems due to accumulation of non-assimilable and non-degradable phosphorus in soil.

SUMM . . . price. The present invention also offers an alternative able to improve color in flowers without stressing or genetically modifying the plant. For this, it is necessary to understand the mechanisms by which plants develop their colors. In plants there are 3 families of pigments that give rise to all colors found in the plant kingdom. Green, yellow and brown colors are given by chlorophyll-like molecules; the major part of yellow, orange and some red. .

SUMM . . . caffeic acid and sinapic acid. Coumaric and ferulic acids constitute the major part of phenolic acids that are present in plant cell walls (Jung [1989], "Forage Lignins and their effect on fiber digestibility". Agron J 81: 33-38). Phenolic acids exist in plant cell walls as monomers joined by ester and ether bonds, as sterified dimers and as crosslinked ester and ethers between. Methyl-0-(E)-Feruloyl-α-L-Arabinofuranoside on In-vitro Degradation of Cellulose and xylan". J Sci Food Agric 61:423-427), playing structural roles by strengthening the plant cell wall and making the plant more resistant to pathogen attack. As the crosslinking between phenolic acids belonging to different polysaccharide chains (normally hemicellulose) increases, the mechanical strength of the plant cell wall increases accordingly, as it becomes more tough and, being more crosslinked and structurally complex, it acquires more resistance. . . 137: 2339-2345), and therefore their antibiotic action is due both to the physical strength increase that they cause in the plant cell wall and to the toxic effect they have to certain bacteria. Amongst phenolic acid derivatives, cinnamates or cinnamic acid derivatives are mostly interesting, as they are precursors in hemicellulose chain lignification pathways during plant growth and ripening. It has been reported that cinnamic acid derivatives, particularly cinnamic acid esters, have antifungic properties ("Synthesis and antifungal. . .

SUMM It is well known that in plants there is a large variety of secondary metabolites that play a protective role against external aggressions. These external aggressions may. . . protective role in the cell is the group of flavonoids. Among them, aside from this general role in the entire plant kingdom, some sub-families of these compounds play specific non-protective roles (for example, pigments), and some flavonoid molecules have different functions inside each particular plant. In their chemical structure, biosynthetic

pathways and functional role, flavonoids themselves are part of and are tightly related to other more general group of compounds, called in general phenolic compounds, also abundant in plants, either as primary metabolites (for example, tyrosines and phenylalanine) or secondary metabolites. The most relevant phenolic compounds in plants are shown in Table 1, along with their basic carbon skeleton (Harborne J. B., T. J. Marby, H. Marby: "The flavonoids". London: Chapman and Hall, (1975)

TABLE 1

#### MOST RELEVANT PHENOLIC COMPOUND

CLASSES IN PLANTS

Number of carbon

atoms Basic skeleton Class

6 C.sub.6 simple phenols, benzoquinones
7 C.sub.6-C.sub.1 phenolic acids
8 C.sub.6-C.sub.2 acetophenones, phenylacetic acids
9 C.sub.6-C.sub.3 hydroxicinnamic acids, . . .
SUMM . . easily oxidizable and when subjected to oxidation they generate polymers (dark aggregates). The browning of cuts or dead parts in plants is due to this reaction. Flavonoids have generally an inhibitory effect over plant growth. Among low molecular weight phenylpropanoid derivatives there is a variety of essences as coumarins, cinnamic acid, sinapinic (sinapic) acid,

coniferyl. . .
SUMM Often, phenolic compounds, including flavonoids, are not free in
plant tissues. In their major part, they are coupled to other
molecules, most frequently with carbohydrate moieties (glycosylated),
but they are . . B., T. J. Marby H. Marby: "The flavonoids".

London: Chapman and Hall, 1975).

TABLE 2

### ECOLOGICAL SIGNIFICANCE OF SOME PHENOLIC

COMPOUNDS IN PLANTS

Examples of plant species where the

Function Group effect has been studied

flower anthocyans Cyanidin-3,5-diglucoside in Rosa pigments chalcones Coreopsin in Coreopsis tinctoria

aurones Aureusin in. . .

SUMM . . . for instance), other classes' members (anthocyans, for example) are always colored and are known as pigments of flowers and other plant parts. Anthocyans are normally red or yellow, their color depending on pH. Blue pigments are obtained through the formation of . . .

SUMM . . . J. Marby, H. Marby: "The flavonoids". London: Chapman and Hall, 1975).

TABLE 3

#### MOST IMPORTANT FLAVONOID CLASSES AND THEIR BIOLOGICAL FUNCTION IN PLANTS

Number of

representative Biological significance (as Class members presently known)

Anthocyanin(s) 250 red and blue pigments Chalcones 60 yellow pigments Aurones 20 yellow... SUMM ... methylation pattern of the three ring system. A correlation between two flavonoids often points out to a relationship between the plant species that produce them. For this reason, they have proven to be suitable characters for the study of phylogenetic relationships between superior plants.

SUMM The flavonoid biosynthetic pathway is one of the most studied metabolic

ne riavonoic biosynthetic pathway is one of the most studied metabolipathways in the plant kingdom, its study being started in 19. sup.th century with the isolation of the first anthocyanins and flavonois. From then on, the pathway has been generally characterized for many plants. Nevertheless, even in our days this biosynthetic pathway has not been characterized in its entirety for any species, as each.

SUMM . p-coumaroyl-CoA. This compound is directly derived from phenylalanine and tyrosine metabolism, and it is also the entrance point for the plant lignin biosynthesis pathway. In this biosynthetic pathway, p-coumarate is transformed also in other particular derivatives of cinnamic acid, especially cinnamic.

SUMM As it can be observed in Scheme 1, the abovementioned large variability of molecular structure of flavonoids in the plant kingdom is due to the action of a relatively small group of enzymes over the substrates available in the cell.

SUMM Many experiments have been made by altering the expression of these enzymes in plants at the level of their genetic sequence. Specifically, gene knock-out tests and over-expression experiments has been made with some of. . . these enzymes, normally observing a final effect in the concentration and proportion of the different flavonoid molecules produced by the plant tissue. Especially, many experiments have been made that report changes in the color of plant tissues, both in color tonality and shade, when the function of one of the enzymes of the metabolic pathway for. . 155:9-23; Gollop, Even, ColovA-Tsolova and Perl (2002), Journal of Experimental Botany 53(373):1397-1409; Bruce, Folkerts, Garnaat, Crasta, Roth and Bowen (2000), Plant Cell 12:65-79; Winkel-Shirley (2001), Plant Physiology 126:485-493; Winkel-Shirley (2001), Plant Physiology 127:1399-1404; Muir, Collins, Robinson, Hughes, Bovy, De Vos, van Tunen and Verhoeyen (2001), Nature Biotechnology 19:470-474; DellaPenna (2001), Plant Physiology 125:160-163; Zhang, Franco, Curtin and Conn (2004), Journal of Biomedicine and Biotechnology 5:264-271; and Rosati, Cadic, Duron, Renou and Simoneau (1997), Plant Molecular Biology 35(3):303-311, Furthermore, part of the anthocyanin biosynthetic pathway has been cloned in Escherichia coli for the production of. . .

SUMM . . . surprisingly found that it is possible to modulate the flavonoid biosynthetic pathway by applying in situ phenolic compounds to living plant tissues, without genetically altering the expression of enzymes that participate in the corresponding pathways and without altering the genetic sequence of the producing plant. More surprisingly, it has been found that the external application to said tissues of some compounds that are not part. . . and said phenolic compounds can even be molecules that are completely different to those molecules naturally found in the treated plant. Without losing generality, it is believed that these different compounds could be incorporated in the flavonoid biosynthesis reactions, as the. . . to accept substrates (or inhibitors) other than their natural substrates, with a variable degree of specificity. In this way, the plant would be able to generate flavonoids in larger amounts and in different ratios. It is believed that the plant could also synthesize flavonoid molecules that are not naturally present in the

plant, by starting from the applied compounds.
. . . according to the methods of the invention have demonstrated to be able to cross the waxy layer that protects the plant, especially over fruit skins, and have also demonstrated to be able to

SUMM

- cross the cell membrane. Without losing generality, it.

  SUMM The present invention is directed to compositions and protection
  methods against sun produced damage, improving and increasing color in
  plants and increasing the nutritional value of plants,
  plant parts, flowers and/or fruits through a change or increase
  of the content of polyphenolic compounds thereof, especially flavonoid
- SUMM ... antifungic properties associated to some of their components and induce antibiotic and antifungic properties that increase the resistance of treated plants against external pathogen and pest aggressions. These compositions are also able to increase the content of antioxidant compounds, especially polyphenols such as flavonoids, that can increase the nutritional value of the plants. The compositions of the present invention are similar to other agrochemical compositions and do not represent any risk during their.

content.

- SUMM . . . present invention is also directed to protection methods against sunburn (to decrease its incidence) and to improve the color in plants, through the application of an effective amount of the compositions of the invention. Furthermore, the present invention is directed to methods to increase the content of polyphenolic compounds in plants, plant parts, flowers and/or fruits, through the application of an effective amount of the compositions of the invention.
- SUMM Furthermore, the present invention is directed to the plants, plant parts, flowers and/or fruits treated with the compositions of the invention.
- DETD . . . it is possible to modulate the flavonoid biosynthetic pathway by applying in situ compositions that comprise phenolic compounds to living plant tissues, without genetically altering the expression of enzymes that participate in the corresponding pathways and without altering the genetic sequence of the producing plant. More surprisingly, it has been found that the external application to said tissues of some compounds that are not part. . . and even said phenolic compounds can be molecules that are completely different to those molecules naturally found in the treated plant. Without losing generality, it is believed that these different compounds could be incorporated in the flavonoid biosynthesis reactions, as the. . . to accept substrates (or inhibitors) other than their natural substrates, with a variable degree of specificity. In this way, the plant would be able to generate flavonoids in larger amounts and in different ratios. It is believed that the plant could also synthesize flavonoid molecules that are not naturally present in the plant. by starting from the applied compounds.
- DETD . . . according to the methods of the invention have demonstrated to be able to cross the waxy layer that protects the plant, especially over fruit skins, and have also demonstrated to be able to cross the cell membrane. Without losing generality, it. . .
- DETD . . been found that the effects of the application of these compositions and methods of the invention affect the ability of plant tissues to resist external aggressions. Specifically, it has been found that fruit treated with these compounds are more resistant to . . .
- DETD An extra aspect of the treatments of the present invention is the increased amount of flavonoid molecules present in the plant tissues treated with the formulations and methods of the invention. This makes the treated plant, when included in human diet, a better source of flavonoids, which increases the nutritional value of the plant product, thus putting said product into the category of functional foods. Given the major contribution to human health represented by a daily intake of enough amounts of flavonoid compounds, plant products treated according to the invention would

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represent a substantial contribution in daily human diet, in comparison
to an untreated plant product, thus improving the health state
of the consumer. Furthermore, with this, the treatment of the invention
allows increasing the commercial value of treated plant
products and makes it possible to open new markets for the
commercialization of said products.
. . thiamethoxam, thiacloprid, clothianidin and the like; an
organochlorine-based pesticide such as bromopropylate, dicofol,
endosulfan, lindane and the like; an insect growth
regulator such as diflubenzuron, chlorfluazuron, teflubenzuron,
triflumuron, flufenoxuron, flucycloxuron, hexaflumuron, fluazuron,
diafenthiuron, novaluron, noviflumuron, bistrifluoron, chromafenozide,
halofenozide, methoxyfenozide, lufenuron, cyromazine, triazamate. .
   . . boscalid and the like; a morpholine-based fungicide such as
dimethomorph, fenpropidin, fenpropimorph, spiroxamine, tridemorph,
dodemorph, flumorph and the like; a strobilurin-based
fungicide such as azoxystrobin, kresoxim-methyl,
metominostrobin, oryzastrobin, fluoxastrobin,
trifloxystrobin, dimoxystrobin, pyraclostrobin, picoxystrobin
and the like; a dicarboximide-based fungicide such as iprodione,
procymidone, vinclozolin, chlozolinate and the like; a soil fungicide.

    as benthiavalicarB-isopropyl, iprovalicarb, propamocarb,

diethofencarb and the like; a pyrrole-based fungicide such as
fluoroimide, fludioxonil, fenpiclonil and the like; a plant
activator for leading resistance to plant diseases such as
probenazole, acibenzolar-5-methyl, tiadinil and the like; a
quinoline-based fungicide such as quinoxyfen, oxolinic acid and the
like;. . .
. . . preferred to apply the compositions as a liquid, as this
allows a higher penetration of the active compounds into the
plant tissue, mostly in the case where the active compound is
solubilized or is emulsified in a liquid carrier, preferably
solubilized..
. . . formulations and applied according to the methods of the
invention are able to cross the waxy layer that protects the
plant, especially over fruit skins, and are also able to cross
the cell membrane. Without losing generality, it is thought that. .
which keep active compounds in solution, in an optimal ionization state,
and allow to achieve a good coverage of the plant parts when
sprayed with the compositions of the invention. Especially, it has been
proven that the use of a volatile.
. . . for each of the compounds of Formula I in the diluted
compositions of the invention that are directly applied to
plants, vary from 0.01% to 20% by weight, especially from 1% to
15% by weight, preferably from 2% to 10% by.
. . . for each of the compounds of Formula I in the diluted
compositions of the invention that are directly applied to
plants, vary from 1 to 200 mM, especially from 5 to 100 mM,
preferably from 10 to 80 mM, and most. . .
. . . present invention may be prepared as concentrated liquid
solutions to be subsequently diluted, generally in water, just before
application over plants. This concentrated composition must be
suitable to allow subsequent dissolution, emulsion or suspension of the
compound of Formula I, in. . .
. . . preparation of said concentrated composition, or any other
suitable solvent. The solvent for the liquid composition to be applied
over plants is preferably water, optionally containing small
amounts of other organic solvents to help solubilize, emulsify or
suspend the compounds of. . . compound of the invention is soluble in
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higher concentrations than the concentration of the solution to be applied over the plant, in such a way that the concentrated solution could be diluted before its application. Specifically, the

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solvent may be pure. . . The solvent may be any solvent used in the agrochemical industry to solubilize active compounds to be applied over a plant after dilution. For example, the solvent may be toluene, xylenes, dimethylsulfoxide, dimethylformamide, ethanol,

methanol, acetone, ether, ethoxiethanol, methoxiethanol, or any. . . . . is achieved, thus obtaining a diluted composition that allows the active compound to penetrate the wax layer that protects the plant and to achieve a complete effect after application.

DETD The most suitable time to apply the compositions is during flower development or fruit development and growth, in one, two or more applications before harvest, and optionally in one, two or more additional applications after harvest.

DETD As previously mentioned, the compositions of the invention are useful for decreasing the incidence of damage caused by sun on plant tissues, especially damage caused by solar radiation and temperature, especially damage caused by UV radiation. Without losing generality, the compositions. . absorb UV radiation, visible radiation or both, and/or able to scavenge and/or stabilize free radicals in the surface of the plant, in the intercellular space (liquid) or in the intracellular space. This effect is due to the increase of concentration of polyphenolic compounds in the plant, such as phenols, acetophenones, phenolcarboxylic acids, phenylacetic acids, cinnamic acids, hydroxicinnamic acids, polypropenes, coumarins, isocoumarins, flavonoids, soflavonoids, biflavonoids, quinones, tannins.

Likewise, the compositions of the present invention are useful to alter the natural color of plant tissues, especially to achieve an increase of color; specifically red, violet, purple, blue, yellow, orange, and red-orange colors, and more. . . the changes in color are related to an alteration of the contents or the proportion of flavonoid compounds in the plant, such as anthocyanins, leucoanthocyanins, chalcones, aurones, flavones, isoflavones, flavans, isoflavans, flavonoles, flavanols, isoflavanols, isoflavanols,

isoflavans, flavonoles, flavanols, isoflavanols, isoflavanols, dihydroflavanols, dihydroflavanols, flavanones, isoflavanones, dihydrochalcones, proanthocyanidins, . . . . Additionally, the compositions of the present invention alter the

content of antioxidant species in plant tissues. Especially, an increase in the content of antioxidant species is expected, i.e.

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molecules able to scavenge and stabilize free.

DETD In the other hand, the present invention also may improve the plant resistance against pests and pathogens. Specifically, the improved resistance is due to the increase in the concentration of polyphenolic compounds or their metabolic derivatives in plant tissues when subjected to a treatment as described, specifically, when this increase in resistance is accompanied by the changes (effects).

DETD Likewise, a higher resistance of the plant product treated as previously described against fungi, bacteria and insects after harvest and during storage, conservation and/or processing may be achieved. Specifically, this resistance is due to the accumulation (concentration) of polyphenolic compounds and/or metabolic derivatives thereof in the plant products treated as previously described, especially flavonoids, such as those mentioned before.

DETD . . those polyphenolic and flavonoid derivatives mentioned above. Specifically, these functional foods are fruits and infrutescences, flowers and inflorescences and/or other plant parts obtained by means of the abovementioned procedures, i.e. flowers and inflorescences, fruits and infrutescences and/or other plant parts treated with the compositions of the invention that result in an increased content of antioxidant species, especially the polyphenolic.

DETD The present invention is also related to plants, plant parts, fruits, flowers and/or propagating material treated

with the compositions of the invention.

. . . said surfactant agent allows a better application and a better penetration of the active compounds in the tissues of treated plants, as explained above. Finally, to 500 ml of the resulting solution a suitable amount of 99.5% ferulic acid (Sigma-Aldrich Co.,. . at room temperature (ID minutes), with no additional heating to avoid inducing degradative processes. These formulations were applied over treated plant parts by spraying, achieving a total coverage of

the treated parts.

. . . agent (Zoom 500, from ANASAC S.A.C.I., Santiago, Chile),
that allows also a better penetration of the active compounds in the
plant tissues, and a volatile pH buffer (ammonium bicarbonate),
both solubilized in water.

TABLE 6

FORMULATION OF THE DILUTION LIQUID

Compound

Amount.

DETD . previously prepared was used and dilution liquid was added up to 500 ml, just before application by spraying over the plants , looking for a total coverage of the treated parts.

TABLE 7

PREPARATION OF THE DILUTED FORMULATION FOR

APPLICATION

Solution Volume (ml)

Concentrated. . .

DETD . . . the final composition of each of the diluted formulations used in the present Example to be applied directly over the plants is presented in Table 8.

TABLE 8

COMPOSITION OF DILUTED FORMULATIONS B

Formulation

Component B-I B-II B-III B-IV B-V B-VI B-VII

Ferulic. . .

DETD . . . a suitable commercial formulation was added to the obtained solution. The obtained solution was immediately applied by spraying over the plants looking for a total coverage of the treated parts, including leaves and branches to keep the effect of the other. . .

DETD . . . the final composition of each of the diluted formulations used in the present Example that were applied directly over the plants is presented in Table 9.

TABLE 9

COMPOSITION OF DILUTED FORMULATIONS C

Formulation

Component C-II C-II

Ferulic ac. 20- 20

(mM)

Tacora 25 WP (g). . .

- CLM What is claimed is:
  - . . thiamethoxam, thiacloprid, clothianidin and the like; an organochlorine-based pesticide such as bromopropylate, dicofol, endosulfan, lindane and the like; an insect growth regulator such as diflubenzuron, chlorfluazuron, teflubenzuron, triflumuron, flufenoxuron, flucycloxuron, hexaflumuron, fluazuron, diafenthiuron, novaluron, noviflumuron, bistrifluoron, chromafenozide, halofenozide, methoxyfenozide, lufenuron, cyromazine, triazamate. . boscalid and the like; a morpholine-based fungicide such as dimethomorph, fenpropidin, fenpropimorph, spiroxamine, tridemorph, dodemorph, flumorph and the like; a strobilurin-based fungicide such as azoxystrobin, kresoxim-methyl, metominostrobin, oryzastrobin, fluoxastrobin, trifloxystrobin, dimoxystrobin, pyraclostrobin, picoxystrobin and the like; a dicarboximide-based fungicide such as iprodione, procymidone, vinclozolin, chlozolinate and the like; a soil fungicide. . as benthiavalicarB-isopropyl, iprovalicarb, propamocarb, diethofencarb and the like; a pyrrole-based fungicide such as fluoroimide, fludioxonil, fenpiclonil and the like; a plant activator for leading resistance to plant diseases such as probenazole, acibenzolar-5-methyl, tiadinil and the like; a quinoline-based fungicide such as quinoxyfen, oxolinic acid and the
- like; . . .

  CLM What is claimed is:
  16. A method to protect a plant, plant parts,
  flowers and/or fruits against the harmful effect of ultraviolet
  radiation wherein said method comprises applying to said plant
  , plant parts, flowers and/or fruits a composition according
  to claim 1.
- CLM What is claimed is:
  17. A method to decrease the incidence of sunburn in plants,
  plant parts, flowers and/or fruits against the harmful effect of
  ultraviolet radiation wherein said method comprises applying to said
  plants, plant parts, flowers and/or fruits a
  composition according to claim 1.
- CLM What is claimed is:

  18. A method to alter the color of plants, plant
  parts, flowers and/or fruits against the harmful effect of ultraviolet
  radiation wherein said method comprises applying to said plant
  , plant parts, flowers and/or fruits a composition according
  to claim 1.
- CLM What is claimed is:

  19. The method of claim 18 wherein said alteration of the color of said plants, plant parts, flowers and/or fruits is a color turn of said plants, plant parts, flowers and/or fruits to red, blue, purple, violet, orange and/or yellow tonalities, departing from green color.
- CLM What is claimed is:
  20. A method to alter the synthesis of polyphenolic compounds in
  plants wherein said method comprises applying to said
  plant a composition according to claim 1.
- CLM What is claimed is:
  21. The method of claim 20 wherein said alteration of the synthesis of polyphenolic compounds in plants is an increase of the synthesis of polyphenolic compounds in plants.
- CLM What is claimed is:

- 22. A method to alter the synthesis of flavonoids in plants wherein said method comprises applying to said plant a composition according to claim 1.
- CLM What is claimed is:
  23. The method of claim 22 wherein said alteration of the synthesis of
  flavonoids in plants is an increase of the synthesis of
  flavonoids in plants.
- CLM What is claimed is:

  24. A method to improve the nutritional value of plants,
  plant parts, flowers and/or fruits wherein said method comprises
  applying to said plant, plant parts, flowers and/or
  fruits a composition according to claim 1.

. . to any of the claims 16, 17, 18, 20, 22 or 24 wherein said composition is directly sprayed over said plants,

CLM

What is claimed is:

according to claim 1.

- plant parts, flowers and/or fruits.

  CLM What is claimed is:
  26. A plant, plant part, flower, fruit and/or propagation material wherein said plant, plant part, flower, fruit and/or propagation material is treated with a composition
- 55179-31-2D, Bitertanol, mixts. with phenolic compds. 55219-65-3D, Triadimenol, mixts. with phenolic compds. 55285-14-8D, Carbosulfan, mixts. with phenolic compds. 55602-77-2D, mixts. with phenolic compds. 55814-41-0D, Mepronil, mixts. with phenolic compds. 57018-04-9D, Tolclofos-methyl, mixts. with phenolic compds. 57369-32-1D, Pyroquilon, mixts. with phenolic compds. 57520-17-9D, mixts. with phenolic compds. 57837-19-1D, Metalaxvl, mixts. with phenolic compds. 57960-19-7D, Acequinocyl, mixts. with phenolic compds. 57966-95-7D, Cymoxanil, mixts, with phenolic compds. 58505-82-1 59669-26-0D, Thiodicarb, mixts. with phenolic compds. 60168-88-9D, Fenarimol, mixts. with phenolic compds. 60207-90-1D, Propiconazole, mixts. with phenolic 61607-82-7D, DBEDC, mixts. with phenolic compds. 62850-32-2D, Fenothiocarb, mixts. with phenolic compds. 62865-36-5D, Diclomezine, mixts. with phenolic compds. 63284-71-9D, Nuarimol, mixts. with phenolic compds. 63542-81-4 63542-82-5 63744-46-7, Leucopetunidin 63935-38-6D, Cycloprothrin, mixts, with phenolic compds. 64440-88-6D, Polycarbamate, mixts. with phenolic compds. 64628-44-0D, Triflumuron, mixts. with phenolic compds. 65934-95-4D, Fenitropan, mixts. with phenolic compds. 66063-05-6D, Pencycuron, mixts. with phenolic compds. 66215-27-8D, Cyromazine, mixts. with phenolic compds. 66230-04-4D, Esfenvalerate, mixts. with phenolic compds. 66246-88-6D, Penconazole, mixts. with phenolic compds. 66332-96-5D, Flutolanil, mixts. with phenolic compds. 66841-25-6D, Tralomethrin, mixts, with phenolic compds. 66952-49-6D, Methasulfocarb, mixts. with phenolic compds. 67306-00-7D, Fenpropidin, mixts. with phenolic compds. 67527-71-3D, Mildiomycin, mixts. with phenolic compds. 67564-91-4D, Fenpropimorph, mixts. with phenolic compds. 67747-09-5D, Prochloraz, mixts. with phenolic compds. 68085-85-8D, Cyhalothrin, mixts. with phenolic compds. 68149-78-0, Caffeic aldehyde 68694-11-1D, Triflumizole, mixts. with phenolic compds. 69327-76-0D, Buprofezin, mixts. with phenolic compds. 69409-94-5D, Fluvalinate, mixts. with phenolic compds. 70124-77-5D, Flucythrinate, mixts. with phenolic compds. 70630-17-0D, Metalaxyl-M, mixts. with phenolic compds. 71422-67-8D, Chlorfluazuron, mixts. with phenolic compds. 71626-11-4D, Benalaxyl, mixts. with phenolic compds. 71751-41-2D, Abamectin, mixts. with phenolic compds. 72490-01-8D, Fenoxycarb, mixts. with phenolic compds. 74115-24-5D, Clofentezine,

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mixts. with phenolic compds. 74738-17-3D, Fenpiclonil, mixts. with
phenolic compds. 74937-48-7D, mixts. with phenolic compds.
76280-91-6D, Tecloftalam, mixts. with phenolic compds.
Flutriafol, mixts. with phenolic compds. 76703-62-3D,
Gamma-cyhalothrin, mixts. with phenolic compds. 77732-09-3D, Oxadixvl,
mixts. with phenolic compds. 78587-05-0D, Hexythiazox, mixts. with
phenolic compds. 79538-32-2D, Tefluthrin, mixts. with phenolic compds.
79622-59-6D, Fluazinam, mixts. with phenolic compds.
                                                      79983-71-4D,
Hexaconazole, mixts, with phenolic compds. 80060-09-9D, Diafenthiuron,
mixts, with phenolic compds. 80844-07-1D, Etofenprox, mixts, with
phenolic compds. 81412-43-3D, Tridemorph, mixts. with phenolic compds.
82560-54-1D, Benfuracarb, mixts. with phenolic compds. 82657-04-3D,
Bifenthrin, mixts. with phenolic compds. 83121-18-0D, Teflubenzuron,
mixts. with phenolic compds. 83130-01-2D, Alanycarb, mixts. with
phenolic compds. 83657-24-3D, Diniconazole, mixts. with phenolic
compds. 84332-86-5D, Chlozolinate, mixts. with phenolic compds.
84466-05-7D, Amidoflumet, mixts. with phenolic compds. 85509-19-9D,
Flusilazole, mixts. with phenolic compds. 86479-06-3D, Hexaflumuron,
mixts. with phenolic compds. 86598-92-7D, Imibenconazole, mixts. with
phenolic compds. 86811-58-7D, Fluazuron, mixts. with phenolic compds.
87130-20-9D, Diethofencarb, mixts. with phenolic compds. 88283-41-4D,
Pyrifenox, mixts, with phenolic compds. 88671-89-0D, Myclobutanil,
mixts, with phenolic compds. 89269-64-7D, Ferimzone, mixts, with
phenolic compds. 89583-90-4D, Benclothiaz, mixts. with phenolic compds.
89784-60-1D, Pyraclofos, mixts. with phenolic compds. 94361-06-5D,
Cyproconazole, mixts. with phenolic compds. 95465-99-9D, Cadusafos,
mixts. with phenolic compds. 95737-68-1D, Pyriproxyfen, mixts. with
phenolic compds. 96182-53-5D, Tebupirimfos, mixts, with phenolic
compds. 96489-71-3D, Pyridaben, mixts. with phenolic compds.
98886-44-3D, Fosthiazate, mixts. with phenolic compds. 101007-06-1D,
Acrinathrin, mixts. with phenolic compds. 101463-69-8D, Flufenoxuron,
mixts. with phenolic compds. 101903-30-4D, Pefurazoate, mixts. with
                 103055-07-8D, Lufenuron, mixts. with phenolic compds.
phenolic compds.
104030-54-8D, Carpropamid, mixts. with phenolic compds. 105024-66-6D,
Silafluofen, mixts. with phenolic compds. 105779-78-0D, Pyrimidifen,
mixts. with phenolic compds. 106917-52-6D, Flusulfamide, mixts. with
phenolic compds. 107534-96-3D, Tebuconazole, mixts. with phenolic
compds. 108173-90-6D, Guazatine, mixts. with phenolic compds.
110235-47-7D, Mepanipyrim, mixts. with phenolic compds.
Dimethomorph, mixts. with phenolic compds. 111872-58-3D, Halfenprox,
mixts. with phenolic compds.
                             111988-49-9D, Thiacloprid, mixts, with
phenolic compds. 112226-61-6D, Halofenozide, mixts, with phenolic
compds. 112281-77-3D, Tetraconazole, mixts, with phenolic compds.
112410-23-8D, Tebufenozide, mixts. with phenolic compds. 113036-88-7D,
Flucycloxuron, mixts. with phenolic compds. 114369-43-6D,
Fenbuconazole, mixts. with phenolic compds. 115852-48-7D, Fenoxanil,
mixts. with phenolic compds. 116255-48-2D, Bromuconazole, mixts. with
phenolic compds. 116714-46-6D, Novaluron, mixts, with phenolic compds.
117428-22-5D, Picoxystrobin, mixts. with phenolic compds. 118134-30-8D,
Spiroxamine, mixts. with phenolic compds. 119168-77-3D, Tebufenpyrad,
mixts. with phenolic compds. 119446-68-3D, Difenoconazole, mixts. with
phenolic compds.
                 119544-94-4D, Protrifenbute, mixts. with phenolic
         119791-41-2D, Emamectin, mixts. with phenolic compds.
120068-37-3D, Fipronil, mixts. with phenolic compds. 120116-88-3D,
Cyazofamid, mixts. with phenolic compds. 120928-09-8D, Fenazaquin,
mixts. with phenolic compds. 121451-02-3D, Noviflumuron, mixts. with
phenolic compds. 121552-61-2D, Cyprodinil, mixts. with phenolic compds.
122431-24-7D, Flupyrazofos, mixts. with phenolic compds. 122453-73-0D,
Chlorfenapyr, mixts. with phenolic compds. 123312-89-0D, Pymetrozine,
mixts. with phenolic compds. 123572-88-3D, Furametpyr, mixts. with
phenolic compds. 124495-18-7D, Quinoxyfen, mixts. with phenolic compds.
125116-23-6D, Metconazole, mixts. with phenolic compds. 125225-28-7D,
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Ipconazole, mixts. with phenolic compds. 126833-17-8D, Fenhexamid,
mixts. with phenolic compds. 129558-76-5D, Tolfenpyrad, mixts. with
                  130000-40-7D, Thifluzamide, mixts. with phenolic
phenolic compds.
          130339-07-0D, Diflumetorim, mixts. with phenolic compds.
131341-86-1D, Fludioxonil, mixts. with phenolic compds. 131807-57-3D,
Famoxadone, mixts. with phenolic compds. 131860-33-8D, Azoxystrobin,
mixts. with phenolic compds. 131983-72-7D, Triticonazole, mixts. with
phenolic compds. 133408-50-1D, Metominostrobin, mixts. with phenolic
        133855-98-8D, Epoxiconazole, mixts, with phenolic compds.
134074-64-9D, Oxpoconazole, mixts, with phenolic compds. 134098-61-6D,
Fenovroximate, mixts, with phenolic compds. 135158-54-2D,
Acibenzolar-S-methyl, mixts. with phenolic compds. 135410-20-7D,
Acetamiprid, mixts. with phenolic compds. 136426-54-5D,
Fluquinconazole, mixts. with phenolic compds.
                                                 138261-41-3D,
Imidacloprid, mixts. with phenolic compds. 139920-32-4D, Diclocymet,
mixts. with phenolic compds. 139968-49-3D, Metaflumizone, mixts. with
phenolic compds. 140923-17-7D, Iprovalicarb, mixts. with phenolic
compds. 141517-21-7D, Trifloxystrobin, mixts. with phenolic compds.
143390-89-0D, Kresoxim-methyl, mixts. with phenolic compds.
143807-66-3D, Chromafenozide, mixts. with phenolic compds.
148477-71-8D, Spirodiclofen, mixts, with phenolic compds.
                                                               149508-90-7D,
Simeconazole, mixts, with phenolic compds. 149877-41-8D, Bifenazate,
mixts, with phenolic compds. 149961-52-4D, Dimoxystrobin, mixts, with
phenolic compds. 150824-47-8D, Nitenpyram, mixts, with phenolic compds.
153233-91-1D, Etoxazole, mixts. with phenolic compds. 153719-23-4D,
Thiamethoxam, mixts. with phenolic compds. 154025-04-4D, Flumetover,
mixts. with phenolic compds. 155569-91-8D, Emamectin benzoate, mixts.
with phenolic compds. 156052-68-5D, Zoxamide, mixts. with phenolic
compds.
        158062-67-0D, Flonicamid, mixts. with phenolic compds.
160791-64-0D, Flubrocythrinate, mixts. with phenolic compds.
161050-58-4D, Methoxyfenozide, mixts. with phenolic compds.
161326-34-7D, Fenamidone, mixts. with phenolic compds. 162650-77-3D,
Ethaboxam, mixts. with phenolic compds.
                                          165252-70-0D, Dinotefuran,
                               168316-95-8D, Spinosad, mixts. with
mixts, with phenolic compds.
phenolic compds. 169202-06-6D, mixts. with phenolic compds.
170015-32-4D, Flufenerim, mixts. with phenolic compds. 173584-44-6D,
Indoxacarb, mixts. with phenolic compds. 174212-12-5D, Oxpoconazole
fumarate, mixts. with phenolic compds. 175013-18-0D, Pyraclostrobin,
mixts. with phenolic compds. 175217-20-6D, Silthiofam, mixts. with
phenolic compds. 177406-68-7D, Benthiavalicarb-isopropyl, mixts. with
                   178928-70-6D, Prothioconazole, mixts, with phenolic
phenolic compds.
compds. 179101-81-6D, Pyridalyl, mixts. with phenolic compds.
180409-60-3D, Cyflufenamid, mixts. with phenolic compds. 181587-01-9D,
Ethiprole, mixts. with phenolic compds. 186959-04-6
188425-85-6D, Boscalid, mixts. with phenolic compds.
189278-12-4D, Proquinazid, mixts. with phenolic compds. 201593-84-2D,
Bistrifluron, mixts. with phenolic compds. 209861-58-5D, Acetoprole, mixts. with phenolic compds. 210880-92-5D, Clothianidin, mixts. with
                  211867-47-9D, Flumorph, mixts. with phenolic compds.
phenolic compds.
220899-03-6D, Metrafenone, mixts. with phenolic compds. 223419-20-3D,
Profluthrin, mixts. with phenolic compds. 223580-51-6D, Tiadinil, mixts. with phenolic compds. 229977-93-9D, Fluarrypyrim, mixts. with
                  239110-15-7D, Picobenzamid, mixts, with phenolic
phenolic compds.
compds.
          240494-70-6D, Metofluthrin, mixts. with phenolic compds.
248593-16-0D, Orysastrobin, mixts. with phenolic compds. 249647-14-1
271241-14-6D, Dimefluthrin, mixts. with phenolic compds. 272451-65-7D,
Flubendiamide, mixts. with phenolic compds. 283594-90-1D, Spiromesifen, mixts. with phenolic compds. 361377-29-9D, Fluoxastrobin, mixts. with
phenolic compds.
                  374726-62-2D, Mandipropamid, mixts. with phenolic
compds. 863549-51-3D, Lepimectin, mixts. with phenolic compds.
876499-25-1 951309-35-6 951309-36-7 951309-37-8 951382-24-4
951382-25-5
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(agrochem. compns. comprising phenolic compds. and methods for protecting plant tissues against UV radiation and improving color and polyphenol content of plants and plant parts)

L9 ANSWER 11 OF 22 USPATFULL on STN

ACCESSION NUMBER: 2007:211176 USPATFULL

TITLE: Liquid pesticide compositions

INVENTOR(S): Finch, Charles W., Dungiven Court Garner, NC, UNITED

STATES

Byrne, Thomas, Chapel Hill, NC, UNITED STATES Oloumi-Sadeghi, Hassan, Raleigh, NC, UNITED STATES

NUMBER KIND DATE

PATENT INFORMATION: US 2007184983 A1 20070809
APPLICATION INFO: US 2005-631462 A1 20050705 (11)

WO 2005-EP7256 20050705 20070103 PCT 371 date

DOCUMENT TYPE: Utility

FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: HUTCHISON LAW GROUP PLLC, PO BOX 31686, RALEIGH, NC, 27612. US

NUMBER OF CLAIMS: 22 EXEMPLARY CLAIM: 1

LINE COUNT: 2167

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention relates to liquid pesticide concentrate compositions which comprise at least one organic pesticide compound that is sparingly or even insoluble in water and which upon dilution with water form stable aqueous nanoparticulate formulations. The liquid pesticide concentrate compositions of the invention comprise: a) at least one organic pesticide compound C having a water solubility of not more than 1 g/l at 25° C./1013 mbar, b) at least one organic solvent S having a water solubility at least 10 g/l at 25° C./1013 mbar, and which is capable of dissolving the pesticide compound C, or a mixture of at least one organic solvent S with water, provided that the weight ratio of water to solvent S does not exceed 1:2, c) at least one non-ionic blockcopolymer P comprising at least one polyethyleneoxide moiety PEO and at least one hydrophobic polyether moiety consisting of repeating units selected from C.sub.3-C.sub.10alkyleneoxides and styrene oxide, d) optionally one or more non-polymeric surfactants, wherein the weight ratio of the non-ionic blockcopolymer to the organic pesticide compound P:C is from 0.6:1 to 10:1 and wherein the components a), b) and optionally d) make up at least 95% of the composition. The invention also relates to aqueous pesticide compositions which are obtained by diluting the concentrate pesticide compositions of the invention with water and to their use for plant protection.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 203924-02-1, Boscalid-pyraclostrobin mixture

(sparingly soluble organic pesticide-, solvent-, and nonionic block copolymer-containing compns. forming stable aqueous nanoparticulate formulations)

RN 203924-02-1 USPATFULL

CN Carbamic acid, N-[2-[[[1-(4-chlorophenyl)-1H-pyrazol-3yl]oxy]methyl]phenyl]-N-methoxy-, methyl ester, mixt. with 2-chloro-N-(4'-chloro[], 1'-biphenyl]-2-yl)-3-pyridinecarboxamide (CA INDEX NAME)

CM 1

CRN 188425-85-6 CMF C18 H12 C12 N2 O

CM 2

CRN 175013-18-0 CMF C19 H18 C1 N3 O4

AB . . . compositions which are obtained by diluting the concentrate pesticide compositions of the invention with water and to their use for plant protection.

SUMM . . . compositions which are obtained by diluting the non-aqueous pesticide compositions of the invention with water and to their use for plant protection.

SUMM . . . the form of a dilute aqueous composition in order to achieve a good interaction with the target organisms, such as plants, funqi and insects. However, most active ingredients that are used as pesticides are only sparinqly or even insoluble in water, .

The pesticide compound C can be selected from each group of active ingredients which are used to protect plants/crops from attack or infestation by harmful organisms, i.e. the pesticide compound can be selected from acaricides, algicides, antecedents, aricides, bactericides, bird repellents, chemosterilans, fungicides, herbicides, herbicide safeners, insect attractants, insect repellents, insecticides, mammal repellents, mating disrupters, moluscicides, nematicides, plant activators, plant growth regulators, rhodenticides, synergists, virucides and other

regulators, rhodenticides, synergists, virucides and other compounds with exert an action on the plants to be protected and/or against the harmful organism.

SUMM . . . phthalides, toloclofos-methyl, quintozenes, zoxamid; strobilurines, e.g. the compounds disclosed in WO 03/075663 by the general formula I, such as azoxystrobin, dimoxystrobin, fluoxastrobin, kresoxim-methyl, metominostrobin,

orysastrobin, picoxystrobin, pyraclostrobin and trifloxystrobin; sulfenic acid derivatives, such as captafol, captan, dichlofluanid, folpet, tolylfluanid;

cinnamic acid amides. . . . SUMM . . . chlorsulfuron, cinosulfuron, cyclosulfamuron,

ethametsulfuron-methyl, flazasulfuron, halosulfuron-methyl, imazosulfuron, metsulfuron-methyl, nicosulfuron, primisulfuron, prosulfuron, pyrazosulfuronethyl, rimsulfuron, sulfometuron-methyl, thisensulfuron-methyl, trissulfuron, tribenuron-methyl,

triflusulfuron-methyl, tritosulfuron; plant protection active ingredients, type cyclohexanone, such as alloxydim, clethodim, cloproxydim, cycloxydim, sethoxydim and tralkoxydim. Most preferred herbicidal active ingredients type. .

SUMM cyfluthrin, cycloprothrin, cypermethrin, deltamethrin, esfenvalerate, ethofenprox, fenpropathrin, fenvalerate, cyhalothrin, lambda-cyhalothrin, permethrin, silafluofen, tau-fluvalinate, tefluthrin, tralomethrin, alpha-cypermethrin, zeta-cypermethrin, permethrin,

arthropodic growth regulators: a) chitinsynthesis inhibitors, e.g. benzoyl ureas, such as chlorfluazuron, diflubenzuron, flucycloxuron, flufenoxuron, hexaflumuron, lufenuron, novaluron, teflubenzuron, triflumuron; buprofezin, diofenolan, hexythiazox, . .

SUMM Examples of plant growth regulators comprise gibberellines and oximes, such as {[(isopropylidene)amino]oxy}a cetic acid-2-methoxy-2-oxoethyl ester, and also defoliants, such as thidiazuron, growth inhibitors, such as butralin, flumetralin, fluoridamid, prohydrojasmon, growth retardants, such as paclobutrazol, uniconazole, growth stimulators, such as brassinolide, forchlorfenuron and the like.

DETD . . the invention relates to a pesticide composition which comprises at least one fungicide which is selected from strobilurines, such as azoxystrobin, dimoxystrobin, such as azoxystrobin, presoxim-methyl, metominostrobin, orysastrobin, pricoxystrobin, pyraclostrobin or trifloxystrobin, azol fungicides, in particular conazoles such as epoxyconazole, tebuconazole, triticonazole, fluquinconazole, flutriafol, metonazole, myclobutanil,

cycproconazole, . . .

DETD . . . used for mixing is usually tap water. However the water may already contain water soluble compounds which are used in plant protection, e.g. nutrificants, fertilizers or water soluble pesticides.

DETD The acqueous pesticide compositions of the invention can be used as suc

The aqueous pesticide compositions of the invention can be used as such for plant protection, i.e. for combating organisms that are harmful to plants or for protecting crops from attack or infestation by such an harmful organism. Therefore, the present invention also relates to . . . concentrate composition of the present invention. The present invention also relates to the use of the aqueous pesticide compositions for plant protection and in particular to a method of combating organisms that are harmful to plants such as weeds, fungi, insects, arachnids or nematodes, which comprises contacting said harmful organisms, their habit, breeding ground, food supply, plant, seed, soil, area, material or environment in which the harmful organisms are growing or may grow, or the materials, plants, seeds, soils, surfaces or spaces to be protected from attack or infestation by harmful organisms with an effective amount of.

DEID . strawberries, vegetables, ornamentals and grapevines, Erysiphe cichoracearum and Sphaerotheca fuliginea on cucurbits, Fusarium and Verticillium species on various plants, Mycosphaerella species on cereals, bananas and peanuts, Phakopsara pachyrhizi and Phakopsara meibomiae on soybeans Phytophthora infestams on.

DETD Nematodes, especially plant parasitic nematodes such as root knot nematodes, Meloidogyne hapla, Meloidogyne incognita, Meloidogyne javanica, and other Meloidogyne species; cyst-forming nematodes, Globodera. . . Stunt nematodes, Tylenchorhynchus claytoni,

Tylenchorhynchus dubius and other Tylenchorhynchus species; Citrus nematodes, Tylenchulus species; Dagger nematodes, Xiphinema species; and other plant parasitic nematode species;

- . . . vegetation is understood as meaning the destruction of weeds. DETD Weeds, in the broadest sense, are understood as meaning all those plants which grow in locations where they are undesired, for example:
- . . . pure active compounds without formulation auxiliary, depends on the density of the undesired vegetation, on the development stage of the plants, on the climatic conditions of the location where the composition is used and on the application method. In general, the.
- DETD The diluted compositions are applied to the plants mainly by spraying, in particular foliar spraying. Application can be carried out by customary spraying techniques using, for example, water. .
- DETD . . . by an application of the composition of active ingredients before a desired crop is seeded, planted or emerged (pre-emergence or pre-plant application), followed by one or more treatments after the crop is emerged with one or more herbicides which are selective.
- DETD . . . wooden materials such as houses, trees, board fences, or sleepers and also paper; and also construction materials, furniture, leathers, animal, plant and synthetic fibers, vinvl articles, electric wires and cables as well as styrene foams.
- The compositions were applied under field conditions at different use DETD rates to plantations of several plant species of leafy and fruiting vegetables, including brassica crops, potatoes, soybean, tobacco, beets and cotton. The insecticidal activity against the. . .
- CLM What is claimed is: 18. The use of a composition as claimed in claim 1 or 16 for plant protection.
- CLM What is claimed is: 19. A method of combating organisms that are harmful to plants , which comprises contacting said harmful organisms, their habit, breeding ground, food supply, plant, seed, soil, area, material or environment in which the harmful organisms are growing or may grow, or the materials, plants, seeds, soils, surfaces or spaces to be protected from attack or infestation by harmful organisms with an effective amount of.
  - 40487-42-1, Pendimethalin 60825-27-6 67375-30-8, Alpha-cypermethrin 87674-68-8, Dimethenamid 101463-69-8, Flufenoxuron 109293-98-3, Diflufenzopyr-sodium 139968-49-3, Metaflumizone 163515-14-8, Dimethenamid P 175013-18-0, Pyraclostrobin 203924-02-1, Boscalid-pyraclostrobin mixture

(sparingly soluble organic pesticide-, solvent-, and nonionic block copolymer-containing compns. forming stable aqueous nanoparticulate formulations)

NUMBER KIND DATE

L9 ANSWER 12 OF 22 USPATFULL on STN ACCESSION NUMBER:

2007:177981 USPATFULL

TITLE: Fungicide composition comprising an arylamidine derivative and known fungicide compounds

INVENTOR(S): Labourdette, Gilbert, Paray le Monial, FRANCE

PATENT INFORMATION:	US	2007155802	A1	20070705	
APPLICATION INFO.:	US	2005-589011	A1	20050303	(10)
	WO	2005-EP3284		20050303	
				20060920	PCT 371 date

NUMBER DATE

PRIORITY INFORMATION: EP 2004-356031 20040305

DOCUMENT TYPE: Utility

FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: OSTROLENK FABER GERB & SOFFEN, 1180 AVENUE OF THE

AMERICAS, NEW YORK, NY, 100368403, US

NUMBER OF CLAIMS: 16 EXEMPLARY CLAIM: 1

LINE COUNT: 946

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

B The present invention relates to a fungicide composition based on N.sub.2-phenylamidine derivatives and another fungicide compound, preferably fluoxastrobin or prothioconazole, and a method for protecting plants against fungal diseases using such a composition.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 188425-85-6, Boscalid

(fungicidal compns. comprising arylamidine derivative and another fungicide for protecting plants)

RN 188425-85-6 USPATFULL

CN 3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-biphenyl]-2-yl)- (CA INDEX NAME)

AB The present invention relates to a fungicide composition based on N.sub.2-phenylamidine derivatives and another fungicide compound, preferably fluoxastrobin or prothioconazole, and a method for protecting plants against fungal diseases using such a composition.

SUMM The fungicide composition useful for the protection of plants against fungi must be endowed with an ecotoxicity which is reduced to the minimum. As far as possible, they should. . .

SUMM ... on page 10, lines 16 to 27, of this document, the N.sub.2-phenylamidine derivatives of formula (I) may be incorporated into plant-protection compositions with agriculturally acceptable carriers or diluents and optionally one or more active ingredients, such as for example fungicide compounds. . . .

SUMM . . . mixtures thereof; and

B) a fungicide compound selected from actinovate; aldimorph; andoprim; boscalid; capsimycin; carvone; clozylacon; cyflufenamid; diclomezine; flumorph; fluoxastrobin; iodocarb; irumamycin; metrafenone; mildiomycin; myclobutanil; orysastrobin; oxolinic acid; oxpoconazole; oxyfenthiin; paclobutrazol; penthlopyrad; picobenzamid; propanosine—sodium; proquinazid; prothioconazole; pyrrolnitrine; GY-81 also known. . . .

SUMM . . . be used for the control of fungi infesting cereals, grapevine, vegetables, lucerne, soyabean, market garden crops, turf, wood and horticultural plants, among others.

SUMM . . . present invention provides a fungicide composition based on N.sub.2-phenylamidine derivatives which is more active against fungi

- which are harmful to plants, and which is in particular active over longer periods than the fungicide agents known up until now.
- SUMM . . . as to be able to reduce the doses of chemical products spread in the environment for combating fungal attacks of plants.
- SUMM . . . treatment of fungal diseases, for example, of cereals, Solanaceae, grapevine, vegetables, lucerne, soyabean, market garden crops, turf, wood or horticultural plants, advantageously on
- SUMM The preferred compounds (B) comprised in the fungicide composition according to the invention are fluoxastrobin and prothiconacole.
- SUMM The preferred fungicide composition according to the invention comprises N-ethyl-N-methyl-N'-[4-(chloro-3-trifluoromethylphenoxy)-2,5-xvlvl]-formamidine and fluoxastrobin or prothioconazola
- SUMM In the case where compound (B) is fluoxastrobin or prothioconazole (or one of their equivalents), it has been found that the weight ratio (A/B) is advantageously 0.055A/BS5.
- SUMM ... the effect defined by application of the Tammes method, "Isoboles, a graphic representation of synergism in pesticides", Netherlands Journal of Plant Pathology, 70(1964), pages 73-80.
- SUMM ... (A) and a compound (B) may also comprise one or more other active ingredients chosen from fungacide, herbicide, insecticide or plant growth regulator compounds.
- SUMM . . . active agents, the fungicide composition according to the invention may also include any other excipient or auxiliary agent useful in plant protection formulations such as, for example, an agriculturally suitable inert carrier and optionally an agriculturally suitable surfactant.
- SUMM . . . compressed gas; gas generating product; granule; hot fogging concentrate; macrogranule; microgranule; oil-dispersible powder; oil miscible suspension concentrate; oil-miscible liquid; paste; plant rodlet; powder for dry seed treatment; seeds coated with a pesticide; smoke candle; smoke cartridge; smoke generator; smoke pellet; smoke.
- SUMM The fungicide composition herein described is used in general for application to growing plants, or to sites where crops are grown or intended to grow, or for the coating or film-coating of seeds.
- ... inorganic, natural or synthetic component with which the active components are combined to facilitate its application, for example, onto the plants, the seeds or the soil. This filler is consequently generally inert and it must be acceptable (for example acceptable for agronomic uses, in particular for treating plants
- SUMM . . methyl isobutyl ketone or isophorone; petroleum fractions such as paraffinic or aromatic hydrocarbons, in particular xylenes or alkylnaphthalenes; mineral or plant oils; aliphatic chlorohydrocarbons, in particular trichloroethane or methylene chloride; aromatic chlorohydrocarbons, in particular chlorobenzenes; water-soluble or highly polar solvents such. .
- SUMM . . . an agronomically effective and substantially non-phytotoxic quantity of a fungicide composition as herein defined is applied to the soil where plants grow or are capable of growing, to the leaves or the fruit of plants or to the seeds of plants.
- factors like the nature of the phytopathogenic fungi to be eliminated or the degree of infestation, for example, of the plants with these fungi, may require higher doses of combined active ingredients.
- SUMM . . . example on the type of phytopathogenic fungus to be controlled, on the type or level of development of the infested plant, on the density of vegetation, or alternatively on the method of application.

- SUMM . . . are, for example, cereals, but this could be grapevines, vegetables, lucerne, soybean, market garden crops, turf, wood, tree or horticultural plants.
- . . . and vegetable crops (haricot bean, onion, cucurbitaceae, SUMM cabbage, potato, tomato, sweet pepper, cabbage, pea, lettuce, celery, chicory), fruit crops (strawberry plants, raspberry plants), tree crops (apple trees, pear trees, cherry trees, ginseng, lemon trees, coconut palms, pecan trees, cacao trees, walnut trees, rubber. . . Tilletia indica), Septoria disease (Septoria nodorum),
- wheat, as regards controlling the following diseases of the aerial parts of the plant: eyespot (Pseudocercosporella herpotrichoides), take-all (Gaeumannomyces graminis), Fusarium disease of the foot (F. culmorum, F. graminearum), Rhizoctonia disease (Rhizoctonia cerealis), powdery. . . diseases (Microdochium nivale and Fusarium roseum),
- barley, as regards controlling the following diseases of the aerial parts of the plant: eyespot (Pseudocercosporella herpotrichoides), yellow leaf spot (Pyrenophora teres and Cochliobolus sativus), powdery mildew (Erysiphe graminis forma specie hordei), dwarf leaf. Rhizoctonia solani, Fusarium solani) and certain virus diseases (virus
- cotton, as regards controlling the following diseases of young plants obtained from seeds: damping-off diseases and collar rot (Rhizoctonia solani, Fusarium oxysporum), black root rot (Thielaviopsis basicola), pea, as. . . seed diseases: anthracnose (Ascochyta pisi, Mycosphaerella
- pinodes), Fusarium disease (Fusarium oxysporum), grey mould (Botrytis cinerea), rust (Uromyces pisi),
- rape plant, as regards controlling the following seed diseases: Phoma lingam and Altemaria brassicae, grey mould (Botrytis cinerea), and sclerotinia disease (Sclerotinia. . .
- SUMM Very advantageously, the method for controlling plant diseases according to the invention has shown excellent results against cereal diseases such as powdery mildew, Septoria diseases and brown.
- SUMM The expression "are applied to the plants to be treated" is understood to mean, for the purposes of the present invention, that the fungicide composition which is. . . applied by means of various methods of treatment such as:
- spraying onto the aerial parts of the said plants a liquid comprising one of the said compositions,
- dusting, the incorporation into the soil of granules or powders, spraying, around the said plants, and in the case of trees injection or daubing.
- coating or film-coating the seeds of the said plants with the aid of a plant-protection mixture comprising one of the said compositions.
- DETD The BBCH scale has been described in Compendium of growth stage identification eves for mono- and dicotvledonous plants, extended BBCH scale, Autumn 1994 by Reinold Stauss, Basle, a joint publication of BBA-BSA-IGZ-IVA AgrEvo-BASF-Bayer-Ciba. CLM What is claimed is:
- - . . and mixtures thereof; and B) a fungicide compound selected from actinovate; aldimorph; andoprim; boscalid; capsimycin; carvone; clozylacon; cyflufenamid; diclomezine; flumorph; fluoxastrobin ; iodocarb; irumamycin; metrafenone; mildiomycin; myclobutanil; orysastrobin; oxolinic acid; oxpoconazole; oxyfenthiin; paclobutrazol; penthiopyrad; picobenzamid; propanosine-sodium; proquinazid; prothioconazole; pyrrolnitrine; GY-81 also known. .
- CLM What is claimed is: 7. Composition according to claim 1 wherein compound (B) is fluoxastrobin.

- CLM What is claimed is:

  8. Composition according to claim 1 wherein compound (A) is
  N-ethyl-N-methyl-N'-[4-(chloro-3-trifluoromethylphenoxy)-2,5-xylyl]formamidine and compound (B) is fluoxastrobin or
  prothioconazole.
- CLM What is claimed is: . . agronomically effective and substantially non-phytotoxic quantity of a fungicide composition according to claim 1 is applied to the soil where plants grow or are capable of growing, to the leaves and/or the fruit of plants or to the seeds of plants
- CIM What is claimed is:

  15. Method according to claim 12 for protecting cereal crops (wheat, barley, maize, rice) and vegetable crops (haricot bean, onion, cucurbitaceae, cabbage, potato, tomato, sweet pepper, cabbage, pea, lettuce, celery, chicory), fruit crops (strawberry plants, raspberry plants), tree crops (apple trees, pear trees, cherry trees, ginseng, lemon trees, coconut palms, pecan trees, caca trees, walnut trees, rubber.

  . trees, poplars, banana trees), grapevine, sunflower, beetroot, tobacco and ornamental crops, luceme, soyabean, market garden crops, turf, wood or horticultural plants.
- ΙT 99-49-0, Carvone 1018-71-9, Pyrrolnitrine 3369-39-9 8064-90-2. Andoprim 13108-52-6, 2,3,5,6-Tetrachloro-4-(methylsulfonyl)pyridine 13484-76-9D, derivs. 14698-29-4, Oxolinic acid 17824-85-0, 3,4,5-Trichloro-2,6-pyridinedicarbonitrile 21452-14-2 55406-53-6, Iodocarb 62865-36-5, Diclomezine 67527-71-3, Mildiomycin 67932-85-8, Clozylacon 70694-08-5, Capsimycin 76280-91-6, Tecloftalam 76738-62-0 81604-73-1, Irumamycin 83657-22-1, Uniconazole 88498-02-6, Propanosine 88671-89-0, Myclobutani1 91315-15-0, Aldimorph 110323-95-0 112860-04-5 119899-14-8 129586-32-9 134074-64-9, Oxpoconazole 149601-03-6 162013-35-6 178928-70-6, Prothioconazole 180409-60-3, Cyflufenamid 183675-82-3, Penthiopyrad 185336-79-2 188425-85-6, Boscalid 189278-12-4, Proquinazid 211867-47-9, Flumorph 220706-93-4 220899-03-6, Metrafenone 223580-51-6, Tiadinil 226551-21-9 239110-15-7 248593-16-0, Orysastrobin 287941-52-0 287941-79-1 348635-87-0 361377-29-9, Fluoxastrobin 750643-57-3 790241-37-1, Tricyclamide 863656-39-7 863710-96-7, Oxvfenthiin

(fungicidal compns. comprising arylamidine derivative and another fungicide for protecting plants)

L9 ANSWER 13 OF 22 USPATFULL on STN

ACCESSION NUMBER: 2007:120550 USPATFULL

TITLE: Systemic plant conditioning composition

INVENTOR(S): Levar, Thomas E., Hermantown, MN, UNITED STATES
PATENT ASSIGNEE(S): Regents of the University of Minnesota, Minneapolis,

MN, UNITED STATES (U.S. corporation)

PRIORITY INFORMATION: US 2005-736137P 20051110 (60)
DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: VIKSNINS HARRIS & PADYS PLLP, P.O. BOX 111098, ST.

PAUL, MN, 55111-1098, US

NUMBER OF CLAIMS: 37 EXEMPLARY CLAIM: 1

AB

RN

LINE COUNT: 1134

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

This invention relates to compositions and methods facilitating availability, uptake and translocation of active ingredients in plants. More specifically, this invention relates to the surprising discovery that the application to the roots, such as administration to the soil surrounding plants, of two or more osmolytes in combination with an active ingredient, either simultaneously or within a short time of each other, results in an induction of translocation of active ingredient from the roots systemically into the plant.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 188425-85-6, Boscalid

(systemic plant conditioning composition with osmolytes as carrier facilitating uptake and translocation of active ingredients in plants) 188425-85-6 USPATFULL

CN 3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-bipheny1]-2-y1)- (CA INDEX NAME)

TI Systemic plant conditioning composition

AB This invention relates to compositions and methods facilitating availability, uptake and translocation of active ingredients in plants. More specifically, this invention relates to the surprising discovery that the application to the roots, such as administration to the soil surrounding plants, of two or more osmolytes in combination with an active ingredient, either simultaneously or within a short time of each other, results in an induction of translocation of active ingredient from the roots systemically into the plant.

This invention relates to compositions and methods facilitating availability, uptake and translocation of active ingredients in plants. More specifically, this invention relates to the surprising discovery that the application to the roots, such as administration to the soil surrounding plants, of two or more osmolytes in combination with an active ingredient, either simultaneously or within a short time of each other, results in an induction of translocation of active ingredient from the roots systemically into the plant.

Commercial cultivation of plants is a major part of the economy, encompassing not only crops grown for human food and animal feed, but also. . . as cotton grown for fiber, trees grown for lumber, and others, such as flowers grown for beauty. The importance of plants to people and to the economy can hardly be overstated. Plants are subject to constant attack by insects and other animals, fungi, bacteria, viruses, nematodes, and other pathogens find susceptible plants, these attacks can result in the loss of vield and quality, and may result in the loss of entire

crops. . . . . There is an on-going need for a means of protecting a variety of trees, crops, flowers, decorative and other plants in the field from

pests and pathogens more effectively, at lower cost, and with less

effort than by the use. . . . SUMM Various devices and systems for the application of systemics to

SUMM

SUMM

SUMM

Various devices and systems for the application of systemics to plants, seeds, and soil, have been developed in the art. U.S. Pat. No. 5,527,366 discloses a method of applying an herbicide to plants that includes delivering a liquid herbicide solution to the plant foliage in a pressurized jet stream to physically disrupt the surface of the foliage. U.S. Pat. No. 4,291,497 describes a method of introducing a chemical agent into plants by spraying or dipping the plant organs into the agent and allowing the agent to penetrate the plant system. U.S. Pat. Nos. 4,994,487 and 5,578,224 disclose a device for injecting a liquid pesticide (fungicide and herbicide, respectively) into the soil adjacent to the root system of plants. U.S. Pat. No. 4,356,934 discloses a

seed treatment method that includes spraying of an emulsion containing an insecticide, fungicide or. . . .

The present invention provides novel compositions and methods of

SUMM The present invention provides novel compositions and methods of protecting plants from pests and pathogens.

Systemic Plant Protection (SPP) is the innovative combination of solvents and transport agents to facilitate availability, uptake and translocation of active ingredients for the purposes of plant protection. This technology addresses plant protection through a system level approach. Components include adjuvants and solvents that condition the soil-plant media, and subsequently the roots, to receive, absorb, transport and release functional ingredients to the systemic benefit of the plant. The use of this technology results in a safe, sustained and valued added benefit to the crop. Using the present technology, active ingredients are induced to be

the present technology, active ingredients are induced to be plant available that are otherwise limited or unavailable for the added benefit of plant protection. The present invention can be used for browse deterrence, pest aversion,

insect repellency, control of diseases, enhanced plant health and crop improvement. Active ingredients are assimilated into tissue and dispersed throughout the plant through natural cellular

solutions to accomplish these functions. This technology can be used with nonfood crops such as reforestation seedlings, . . . . . . nursery level to transplants or integrated into the cultural

management of crop in situ, for a residual benefit to the plants . The functional ingredients in SPP are used in personal care, cosmetic, and health care products. The technology is unique and versatile, in that active ingredients are induced to be plant available (i.e., absorbed and translocated systemically) that are fundamentally, naturally not assimilated by the target plant. SPP facilitates plant assimilation of the added benefit of sustained plant protection.

SUMM . . and other cultural regimes, without loss of benefits. Such integration is most cost effective for commercial operations. Finally, SPP facilitates plant assimilation of active ingredients not otherwise plant available and functional.

SUMM The invention provides compositions for soil application to plants comprising an active ingredient composition and two or more osmolytic carrier compositions where the amount of the active ingredient is elevated over the level naturally found in an untreated plant. In addition to the active ingredient, the formulation may also include an adjuvant. As is known in the art, an.

SUMM The present invention provides methods of introducing an active ingredient into a plant by contacting one or more roots and root related structures (i.e., fine roots and root hairs) of a plant with an active ingredient composition and two or more

(e.g., two, three, four, five, six, seven, eight, nine, ten, etc.). . . . osmolytic carrier compositions, where the amount of the active ingredient is elevated over the level naturally found in an untreated plant. In certain embodiments, the active ingredient is elevated by at least 1% over the level naturally found in an untreated plant. In certain embodiments, the amount of active ingredient is elevated by 10%, 100%, 100% or more over the level naturally found in an untreated plant.

SUMM . . . laurel sulfate) can be used as a transport agent and surfactant, BABA (Beta aminobutyric acid) can be used as a plant growth hormone, and/or BTH (benzothiadiazole) can be used as a transport agent.

The present invention provides a systemic plant conditioning composition for conditioning a target plant that has an osmotic membrane, where the conditioning composition contains (a) an active ingredient, and (b) an osmolyte carrier composition, comolyte composition comprises at least two solutes where at least one solute is capable of translocating into and within a plant through the roots, and wherein at least one solute is capable of carrying the active ingredient into and within the plant. In certain embodiments, the conditioning composition may further contain a chelating agent (e.g., EDTA), and/or a surfactant or wetting agent.

betaine or glycine betaine. In certain embodiments, the conditioning composition further contains a solubilizing agent that will not burn the plant, such as ethanol or methanol.

SUMM . . . vomitoxin. In certain embodiments the active ingredient is a nutrient, such as ammonia or other nitrogenous compound, phosphate, micro-nutrient or plant growth hormone of known and proven effectiveness. In certain embodiments the active ingredient is an insecticide, such as a synthesized or. . In certain embodiments the active ingredient is a small molecule that is not indigenous (i.e., "exogenous") to the particular target plant, such as a vitamin, phytonutrient, medicinal, pharmaceutical, nutraceutical or other natural compound of known and proven health benefits. In certain embodiments the active ingredient is a fungicide, such as azoxystrobin, bordeaux, propiconazole, triadimefon, myclobutanii, thiophanate-methyl, boscalid, fenbuconazole, fenhexamid, fosetyl-al, iprodione, vinclozolin, chlorothalonii, cyprodinii, copper octanoate, daconil triforine, captan, borax, benomyl, . . .

SUMM osmolyte composition comprises at least two solutes where at least one solute is capable of translocating into and within a plant through the roots, and wherein at least one solute is capable of carrying an active ingredient into and within the plant.

The present invention provides a method of administering a systemic plant conditioning composition for conditioning a target plant by delivering the composition to soil surrounding the roots of the plant. In certain embodiments the composition is not injected into the plant, nor is it topically administered to the plant. In certain embodiments, at least one osmolyte carrier conditions the osmotic membrane in the target plant for enhanced root uptake and translocation. In certain embodiments, the conditioning composition is formulated to provide sustained release of the.

DETD This invention arises from the surprising discovery that the application to plants of one or more active ingredient compositions and of two or more osmolytic carrier compositions, either simultaneously or within a. . . short time of each other, results in an induction of translocation of active ingredient from the roots systemically into the plant.

DETD This invention relates to formulations and methods for enhancing the efficacy of exogenous chemicals used in treating plants. An

exogenous chemical, as defined herein, is any chemical substance, whether naturally or synthetically derived, which (a) has biological activity or is capable of releasing in a plant an ion, moiety or derivative which has biological activity, and (b) is applied to a plant with the intent or result that the chemical substance or its biologically active ion, moiety or derivative enter living cells or tissues of the plant and elicit a stimulatory, inhibitory, regulatory, therapeutic, toxic or lethal response in the plant itself or in a pathogen, parasite or feeding organism present in or on the plant. Examples of exogenous chemical substances include, but are not limited to, chemical pesticides (such as herbicides, algicides, fungicides, bactericides, viricides, insecticides, aphicides, miticides, mematicides, mollipscides, dand the like), plant growth regulators, fertilizers and nutrients, gametocides, defoliants, desiccants, mixtures thereof, and the like.

- Other examples of exogenous chemical substance include, but are. . . DETD . . . . herein refers to the mingling of two or more liquid, solid or aerosolized components before, during or after contact to plants
- DETD The phrase "increase the level above the level found in an untreated plant" specifies a level that is above the level naturally found in a plant. The level from which change is measured is the level of the active ingredient found in an untreated plant, plant part, or plant product of interest. Therefore, the phrase quoted above refers to any concentration of active ingredient that is above this level.
- DETD The terms "administering" and "contacting" plants with a chemical or compound, as used herein, generally comprehend causing the plant to come into proximity with an exogenous liquid or solid (such as a powder) form of the chemical or compound. They do not comprehend the injection of compounds or chemicals into individual leaves or into individual plants.

  DETD As used herein the term "plant" encompasses all forms and
- organs of a monocotyledonous or dicotyledonous plant, including but not limited to the seed, the seedling, and mature plant. The plant can be edible by humans or by animals, can be grown for lumber or fiber content (such as cotton), can. . . to become a medicine or medicament, or can be for decorative, ornamental, or recreational use, such as turf grass, house
- plants, flowers, or landscaping or Christmas trees.

  As used herein, the term "pathogen resistance" refers to the ability of a plant to lessen the development of disease symptoms after exposure to a plant, insect or microbe.
- DETD The term "foliar application" refers to the application of substances to the foliage, or above-ground portions, of plants, and especially application to the leaves of the plants. It is understood in the art that incidental amounts of substances used in foliar applications may filter to or contact the soil, but not in quantities that will permit penetration of the soil and significant contacting of the plant's roots compared to the amount contacting the leaves and other above-ground structures.
- DETD The term "soil application" refers to the application of a substance to the soil around a plant, where the intent is either to affect the soil directly or to place the roots of the plant in contact with the substance. Generally, substances applied through a soil application will not contact the foliage, but it is.
- DETD A. SYSTEMIC PLANT CONDITIONING COMPOSITIONS

  Active ingredients that can be used in the present invention include chemicals, such as herbicides, insecticides, fungicides, bacteriocides, plant growth regulators and nutritional additives for crop improvement.
- DETD . . . provided in Table 1 below.

```
Fungicides
Reference: Cornell, EPA and Federal Register
           acetic acid
          aluminum-phosphine
          anilazine (Dyrene)
          ampelomyces quisqualis (AQ10)
             azoxystrobin (Abound)
           bacillus licheniformis SB3086
           bacillus pumilus GB34
          bacillus pumilus strain QST 2808 (SonataTM)
          bacillus subtilis
           bacillus subtilis MBI 600
           basic. . (Ethazol, Terrazole)
           famoxadone
           fenamidone (Reason)
           fenaminosulf (Dexon)
           fenamiphos (Nemacur)
           fenarimol (Rubigan)
           fenbuconazole
           fentin hydroxide (Du-Ter, TPTH)
           ferbam
           fluazinam
          fludioxonil (Maxim)
             fluoxastrobin
          flutolanil (Moncut)
           fosetyl-al (Aliette)
          gliocladium virens GL-21 (WRC-GL-21)
          alvodin
          hexachlorobenzene (HCB, Anticarie)
          hexaconazole
           imazalil (Fecundal, Fungaflor)
          iprodione
           iprovalicarb
          kasugamycin
          mancozeb.
       Examples of suitable herbicides, growth regulators
      and desiccants are provided in Table 2 below.
TABLE 2
Herbicides Growth Regulators and Desiccants
Reference: Cornell, EPA and Federal Register 2005
2,4-D (Dacamine, Weed-B-Gon)
2,4-DB (Butoxone, Butyrac)
2,4-DP (dichlorprop)
2,6-Diisopropylnaphthalene
2,4 D-dimethylamine
6-benzyladenine (Accel)
acetochlor (Harness)
acibenzolar-S-methyl
acifluorfen (Tackle)
acrolein (Aqualin, Magnacide)
alachlor (Lasso)
```

allidochlor. . . (Alanap)

```
nicosulfuron (Accent)
norflurazon (Zorial, Solicam)
N, N-diethyl-2-(4-methylbenzyloxy)ethylamine hydrochloride
(PT 807-HCL)
octvlammonium
oryzalin (Surflan, Ryzelan)
oxadiazon (Ronstar)
oxyfluorfen (Goal)
paclobutrazol (Clipper 50 WP)
paraguat
pebulate (Tillam)
pelargonic acid
pendimethalin (Prowl)
perfluidone (Destun)
phenmedipham (Betanal, Spin-Aid)
picloram (Tordon, Grazon)
 plant extract 620
primisulfuron-methyl (Beacon)
prodiamine (Barricade)
profluralin (Tolban)
prohexadione-calcium (viviful)
prometon (Pramitol)
prometryn (Caparol, Prometrex, Primatol O)
pronamide (Kerb)
propachlor (Ramrod, Bexton)
propanil
propazine (Milocep, Milogard)
propham (Chem Hoe)
prosulfuron (Exceed)
pyraflufen-ethyl
pyrazon (Pyramin)
pyridate. . .
                transport function associated with the ammonium ion and its
DETD
       oxidized forms. BABA (Beta aminobutyric acid) can be used as a
      plant growth hormone, and/or BTH (benzothiadiazole)
       can be used as a transport agent. BABA and BTH are demonstrated and
       known to be. .
DETD
        . . . apparent to one of ordinary skill in the art that the
       "effective amount" of the active ingredient compound in a plant
       will be largely variable, depending on many factors, including the
       species of plant and its growth stage, row and
      plant spacing, environmental conditions, weather, etc. In
      certain embodiments, the active ingredient concentration is between
      about 0.01 to 10.0% (e.g., 0.01,.
DETD
       An effective amount of active ingredient compound is an amount
       sufficient to induce a biological response in the plant, such
       that the level of active ingredient in the treated plant is
       greater than the levels of active ingredient in control (untreated)
       plants. Such amounts can be determined by routine testing. The
       effective amount can be achieved by one application of the composition.
       Alternatively, the effective amount is achieved by multiple applications
      of the composition to the plant. The amount of the active
       ingredient in the composition will depend upon the particular compound
       or mixture of compounds being employed, the plant tissue being
       treated, and the ability of the plant to take up the
      composition. For instance, young plants take up most
       compositions more readily than older plants. It is
       contemplated that the various compositions used to practice the method
      of the present invention should contain from about. . .
DETD
       . . . concentration. There will be an upper limit on the
       concentration of different active ingredients that can be applied to a
       plant without toxicity, and the upper limit varies for different
```

types of plants. Active ingredients must be used within the rate range listed on the product label, to not violate safety, environmental or product warranty. In most cases the lowest label rate will be effective with SPP. The size of the individual plant or the field density of the crop will dictate the volume of SPP mixture applied, as well as the concentration. . .

DBID The upper limit on the concentration of the active ingredients for any particular plant type can be routinely determined by any of several methods known in the art, such as exposing sample plants of the type in question to various concentrations of active ingredients and examining the plants for signs of stress, such as browning of tips of leaves, indicating that the concentration at which the stress signs occurred is too high for that type of plant. Upper limits on the concentration of osmolyte carrier composition can be determined in the same manner.

DETD B. ADMINISTRATION OF SYSTEMIC PLANT CONDITIONING COMPOSITIONS

. . within about an hour of each other. In certain embodiments, pressurized or passive injection into the vascular system of the plant may not be recommended due to cost. Topical absorption through foliage and cuticle may be more cost effective.

DETD The treatment of the plant may also involve adding the composition to the water supply of the plants. The application can be repeated as often as considered useful, with one or more "booster" applications applied to bolster resistance. . .

DETD the soil so that the active ingredient/osmolyte mixture can move freely in the soil and reach the roots of the plants. Therefore, the soil is saturated to 70-80% field capacity with ordinary water prior to active ingredient/osmolyte application. The active ingredient/osmolyte application. The active ingredient/osmolyte mixture, perhaps because more water containing the mixture reaches the roots of the plants. Conversely, lower flow rates will generally require higher concentrations of active ingredient/osmolyte mixture. Alternatively, the time of the application of . . .

DETD . . medium. Saturated medium facilitates exposure and uptake by the seedling. These methods are useful for greenhouse crops and potted nursery plants. Another liquid technique is the use of a wettable powder. This method is designed for ingredients that are suspended in . . liquid technique is the use of foliar spray. This method is designed for topical coating of foliage and above ground plant parts, and is often dual purpose (i.e., topical coating with over-spray penetrating through root uptake). This method requires leaf and.

DETD . . may be administered in the form of granules, in peat, etc. to the soil surrounding the roots of the target plant. In one embodiment, the active ingredient/osmolyte mixture is a solid (for instance, a powder or dust). These types of formulations . . earth and other bioinsecticide products such at Bt for multiple benefits. These methods are useful for rose bushes and bedding plants with multiple pest problems. In another embodiment, the active ingredient/osmolyte mixture is granular (uncoated). These types of formulations are designed. .

DETD . . . ingredient/osmolyte mixture as set forth above, the mixture will typically be in the top few inches of soil. For many plants , the root system is deeper in the soil. It is therefore desirable to help move the mixture 6 to 12. . . .

DETD The invention can be used to protect almost any plant capable of responding to pest or pathogenic attack with systemic acquired resistance. Assays for determining whether a particular type of plant can benefit from the induction of systemic acquired resistance by means of the invention are well known in the art....

DETD The plants to be protected by means of the invention can be

dicots, such as carrots, lettuce, tomatoes, grapes, citrus fruits, and beans, or monocots, such as corn. The plants can be grown for human or animal consumption, such as grains, vegetables, and fruits can be intended for decorative use, . . . or can be intended for ornamental use, such as trees grown for use as lumber, ornamental trees, Christmas trees or plants intended for use as house plants. Truther, they can be plants grown for fiber, such as cotton plants, for use as turf, for example on golf courses, lawns or ballfields, or for use as or in medicaments. Most commonly, the invention will be used to protect plants grown in fields as crops or in other open conditions, such as tree farms or turf, the invention can, however, also be used to protect plants grown in settings such as greenhouses and hothouses.

- DEID The invention can be used to protect plants against any pest or pathogen against which systemic acquired resistance can be generated. The Example demonstrate the use of the
- DETD Non-limiting examples of plant pathogens include insects (e.g., diptera, hymenoptera, coleoptera, lepidoptera, orthoptera, hemiptera, and homoptera), bacteria (in soybeans, for example, Pseudomonas syringae pv.
- DETD Non-limiting examples of plant diseases include 1) infectious diseases such as a) bacterial diseases (in soybeans, for example, Bacterial Blight, Bacterial Pustule, Bacterial Tan.
- DETD Because the invention protects plants against at least a portion of the damage that would otherwise be caused by these pests, a higher percentage of the plants grown for can be sold as first quality plants. Moreover, since less of the crop is unmarketable, the invention results in a higher yield per acre. These factors combine.
- DETD D. METHODS FOR DETERMINING EFFECTIVENESS OF ACTIVE INGREDIENT/OSMOLYTE CARRIER COMPOSITIONS IN PLANTS
- DETD Plant extractives and natural derivatives are used as deterrents and repellants. Some are also toxic to insect pests. Examples include Pyrethrum. . . .
- DEID Insect Growth Regulators (IGR) inhibit, interrupt or interfere with the metamorphosis of insect pest and/or the synthesis of chitin (exoskeleton), resulting in population. . . .
- CLM What is claimed is:

  1. A systemic plant conditioning composition for conditioning
  a target plant that has an osmotic membrane comprising (a) an
  active ingredient, and (b) an osmolyte carrier composition, wherein the
  active ingredient. . . osmolyte composition comprises at least two
  solutes where at least one solute is capable of translocating into and
  within a plant through the roots, and wherein at least one
  solute is capable of carrying the active ingredient into and within the
  plant.
- CLM What is claimed is: 10. The composition of claim 1, further comprising a solubilizing agent that will not burn the plant.
- CLM What is claimed is:

  17. The composition of claim 16, wherein the nutrient is ammonia or other nitrogenous compound, phosphate, micro-nutrient or plant growth hormone of known and proven effectiveness.
- CLM What is claimed is:
  . . . composition of claim 1, wherein the active ingredient is a small molecule that is not indigenous to the particular target plant
- CLM What is claimed is:

- 23. The composition of claim 22, wherein the fungicide is azoxystrobin, bordeaux, propiconazole, triadimefon, myclobutanil, thiophanate-methyl, boscalid, fenbuconazole, fenhexamid, fosetyl-al, iprodione, vinclozolin, chlorothalonil, cyprodinil, copper octanoate, daconil, triforine, captan, borax, benomyl.
- CLM What is claimed is: . . . osmolyte composition comprises at least two solutes where at least one solute is capable of translocating into and within a plant through the roots, and wherein at least one solute is capable of carrying an active ingredient into and within the plant.
- CLM What is claimed is: 32. A method of administering the composition of claim 1 to a target plant, comprising delivering the composition to soil surrounding the roots of the plant.
- CLM What is claimed is: 33. The method of claim 32, wherein the composition is not injected into the plant.
- CLM What is claimed is: 34. The method of claim 32, wherein the composition is not topically administered to the plant.
- CLM What is claimed is:

  35. The method of claim 32, wherein at least one osmolyte carrier conditions the osmotic membrane in the target plant for enhanced root uptake and translocation.
- 54-11-5, Nicotine 60-00-4, EDTA, biological studies 67-68-5, DMSO, biological studies 133-06-2, Captan 137-26-8, Thiram 137-30-4, 1303-96-4, Borax 2235-54-3, Ammonium lauryl sulfate Ziram 5234-68-4, Carboxin 7664-41-7, Ammonia, biological studies 7704-34-9, Sulfur, biological studies 7727-37-9D, Nitrogen, compds. 8011-63-0, Bordeaux mixture 8018-01-7, Mancozeb 11141-17-6, Azadirachtin 12427-38-2, Maneb 14265-44-2, Phosphate, biological studies 17804-35-2, Benomyl 20543-04-8, Copper octanoate 23564-05-8, Thiophanate-methyl 26644-46-2, Triforine 34199-35-4, Hydroxydanaidal 36734-19-7, Iprodione 39148-24-8, Fosetyl-al 40596-69-8, Methoprene 41096-46-2, Hydroprene 42588-37-4, Kinoprene 43121-43-3, Triadimefon 50471-44-8, Vinclozolin 51481-10-8, Vomitoxin 57837-19-1, Metalaxyl 60207-90-1, Propiconazole 70630-17-0, Mefenoxam 88671-89-0, Myclobutanil 95737-68-1, Nylar 107534-96-3, Tebuconazole 114369-43-6, Fenbuconazole 119446-68-3, Difenoconazole 121552-61-2, Cyprodinil 126833-17-8, Fenhexamid 131341-86-1, Fludioxonil 131860-33-8, Azoxystrobin 188425-85-6, Boscalid (systemic plant conditioning composition with osmolytes as carrier facilitating uptake and translocation of active ingredients in plants)

L9 ANSWER 14 OF 22 USPATFULL on STN
ACCESSION NUMBER:
Z007:69324 USPATFULL
Synergistic fungicidal active substance combinations
Wachendorff-Neumann, Ulrike, Neuwled, GERMANY, FEDERAL
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NUMBER KIND DATE

PATENT INFORMATION: US 2007060579 A1 20070315
APPLICATION INFO.: US 2004-573066 A1 20040928 (10)
WO 2004-EP10830 20040928
20061024 PCT 371 date

NUMBER DATE

PRIORITY INFORMATION: DE 2003-103 20031010

DOCUMENT TYPE: Utility

FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: STERNE, KESSLER, GOLDSTEIN & FOX PLLC, 1100 NEW YORK

AVENUE, N.W., WASHINGTON, DC, 20005, US

NUMBER OF CLAIMS: 14 EXEMPLARY CLAIM: 1

LINE COUNT: 2881

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Novel active compound combinations comprising a carboxamide of the general formula (I) (group 1) ##STR1## in which A, R.sup.1,

R.sup.2 and R.sup.3 are as defined in the description, and the active compound groups (2) to (23) listed in the description have very good fundicidal properties.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 188425-85-6D, Boscalid, mixture with carboxamide derivative 849674-78-8

(synergistic fungicidal combination)

RN 188425-85-6 USPATFULL

CN 3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-bipheny1]-2-y1)- (CA INDEX NAME)

- RN 849674-78-8 USPATFULL
- CN 3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-biphenyl]-2-yl)-, mixt. with N-(3',4'-dichloro-5-fluoro[1,1'-biphenyl]-2-yl)-3-(difluoromethyl)-1-methyl-1H-pyrazole-4-carboxamide (9CI) (CA INDEX NAME)

CM 1

CRN 581809-46-3

CMF C18 H12 C12 F3 N3 O

CM 2

CRN 188425-85-6 CMF C18 H12 C12 N2 O

SUMM . . . fluorine, chlorine and/or bromine atoms, and at least one active compound selected from groups (2) to (23) below: Group (2) Strobilurins of the general formula (II) ##STR4## in which

A.sup.1 represents one of the groups ##STR5##

A.sup.2 represents NH. . . SUMM The formula (II) embraces the following preferred mixing partners of group (2):

- (2-1) azoxystrobin (known from EP-A 0 382 375) of the formula ##STR27##
- (2-2) fluoxastrobin (known from DE-A 196 02 095) of the formula ##STR28##
- (2-3) (2E)-2-(2-{[6-(3-chloro-2-methylphenoxy)-5-fluoro-4-pyrimidinyl]oxy]phenyl)-2-(methoxyimino)-N-methylethanamide (known from DE-A 196 46 407, EP-B. . . 98/23155) of the formula ##STR34##
- (2-9) kresoxim-methyl (known from EP-A 0 253 213) of the formula ##STR35##
- (2-10) dimoxystrobin (known from EP-A 0 398 692) of the formula ##STR36##
- ##51K30##
- (2-11) picoxystrobin (known from EP-A 0 278 595) of the formula ##STR37## (2-12) pyraclostrobin (known from DE-A 44 23 612) of the formula ##STR38##
- (2-13) metominostrobin (known from EP-A 0 398 692) of the formula ##STR39##
- SUMM Particularly preferred mixing partners are the following active compounds:
  - (2-1) azoxystrobin
- (2-2) fluoxastrobin

```
(2-3) (2E)-2-(2-{[6-(3-chloro-2-methylphenoxy)-5-fluoro-4-
       pyrimnidiny1]oxy}pheny1)-2-(methoxyimino)-N-methy1ethanamide
 (2-4) trifloxystrobin
 (2-5) (2E)-2-(methoxyimino)-N-methyl-2-(2-{[({(1E)-1-[3-
       (trifluoromethyl)phenyl]ethylidene} amino)oxylmethyl}phenyl)ethanamide
 (2-6) (2E)-2-(methoxyimino)-N-methyl-2-{2-[(E)-({1-[3-(trifluoromethyl)phenyl]-}
       ethoxy}imino)methyl]phenyl}ethanamide
 (2-8) 5-methoxy-2-methyl-4-(2-{[({(1E)-1-[3-(trifluoromethyl)phenyl]ethylidene
       }-amino)oxv[methvl]phenvl)-2,4-dihvdro-3H-1,2,4-triazol-3-one
 (2-11) picoxystrobin
 (2-9) kresoxim-methyl
 (2-10) dimoxystrobin
 (2-12) pyraclostrobin
 (2-13) metominostrobin
 (3-3) propiconazole
 (3-4) difenoconazole
 (3-6) cyproconazole
 (3-7) hexaconazole
 (3-8) penconazole
 (3-9) myclobutanil
 (3-10).
SUMM
       Very particularly preferred mixing partners are the following active
       compounds:
 (2-2) fluoxastrobin
 (2-3) (2E)-2-(2-{[6-(3-chloro-2-methylphenoxy)-5-fluoro-4-
       pyrimidinyl | oxy | phenyl | -2-methoxyimino | -N-methylethanamide
 (2-4) trifloxystrobin
 (3-15) prothioconazole
 (3-17) tebuconazole
 (3-21) bitertanol
 (3-22) triadimenol
 (3-24).
       In addition to a carboxamide of the formula (I) (group 1), the active
SUMM
       compound combinations A also comprise a strobilurin of the
       formula (II) (group 2)
                                 ##STR177##
                                              in which A.sup.1, L and R.sup.14
       are as defined above.
SUMM
       Particular preference is given to active compound combinations A in
       which the strobilurin of the formula (II) (group 2) is
      selected from the list below:
 (2-1) azoxystrobin
 (2-2) fluoxastrobin
 (2-3) (2E)-2-(2-{[6-3-chloro-2-methylphenoxy]-5-fluoro-4-
       pyrimidinyl]oxy}phenyl)-2-methoxyimino)-N-methylethanamide
 (2-4) trifloxystrobin
 (2-5) (2E)-2-methoxyimino)-N-methyl-2-(2-)[({(1E)-1-[3-
       (trifluoromethyl)phenyl|ethylidene}-amino)oxy|methyl|phenyl)ethanamide
 (2-6) (2E)-2-(methoxvimino)-N-methyl-2-{2-[(E)-({1-[3-
       (trifluoromethyl)phenyl|ethoxylimino)methyl|phenyl|ethanamide
 (2-7) orvsastrobin
 (2-8) 5-methoxy-2-methyl-4-(2-{[({(1E)-1-[3-trifluoromethyl)phenyl]ethylidene}
       amino)oxy]-methyl}phenyl)-2,4-dihydro-3H-1,2,4-triazol-3-one
 (2-9) kresoxim-methyl
 (2-10) dimoxystrobin
 (2-11) picoxystrobin
 (2-12) pyraclostrobin
 (2-13) metominostrobin
       Very particular preference is given to active compound combinations A
       in which the strobilurin of the formula (II) (group 2) is
       selected from the list below:
 (2-1) azoxystrobin
```

(2-2) fluoxastrobin

(2-3) (2E)-2-(2-{[6-(3-chloro-2-methylphenoxy)-5-fluoro-4-

```
pyrimidinyl]oxy}phenyl)-2-(methoxyimino)-N-methylethanamide
 (2-4) trifloxystrobin
 (2-12) pyraclostrobin
 (2-9) kresoxim-methvl
 (2-10) dimoxystrobin
 (2-11) picoxystrobin
 (2-13) metominostrobin
SUMM
             . the active compound combinations A listed in Table 1 below:
TABLE 1
Active compound combinations A
No.
       Carboxamide of the formula (I)
       Strobilurin of the formula (II)
A-1
       (1-1) N-(3',4'-dichloro-5-fluoro-1,1'-biphenvl-2-vl)-3-
                                                                   (2-1)
       azoxystrobin
       (difluoromethyl)-1-methyl-1H-pyrazole-4-
       carboxamide
A-2
       (1-1) N-(3', 4'-dichloro-5-fluoro-1,1'-biphenyl-2-yl)-3-
                                                                    (2-2)
       fluoxastrobin
       (difluoromethyl)-1-methyl-1H-pyrazole-4-
       carboxamide
A-3
       (1-1) N-(3', 4'-dichloro-5-fluoro-1,1'-bipheny1-2-y1)-
                                                                   (2-3)
       (2E)-2-(2-{[6-(3-chloro-2-
       3-(difluoromethyl)-1-methyl-1H-pyrazole-
       methylphenoxy)-5-fluoro-4-pyrimidinyl]
       4-carboxamide
      oxv{phenvl)-2-(methoxvimino)-
      N-methylethanamide
A-4
       (1-1) N-(3', 4'-dichloro-5-fluoro-1,1'-biphenyl-2-yl)-3-
                                                                  (2-4)
       trifloxystrobin
       (difluoromethyl)-1-methyl-1H-pyrazole-4-
      carboxamide
A-5
      (1-1) N-(3', 4'-dichloro-5-fluoro-1,1'-biphenyl-2-yl)-3-
                                                                   (2-12)
      pyraclostrobin
       (difluoromethyl)-1-methyl-1H-pyrazole-4-
      carboxamide
A-6
      (1-2) 3-(difluoromethyl)-N-{3'-fluoro-4'-[(E)-(methoxyimino) (2-1)
       azoxystrobin
      methvll-1.1'-biphenvl-2-vll-1-methvl-1H-
       pyrazole-4-carboxamide
A-7
       (1-2) 3-(difluoromethyl)-N-{3'-fluoro-4'-[(E)-(methoxyimino) (2-2)
       fluoxastrobin
       methyl]-1,1'-biphenyl-2-v1}-1-methyl-1H-
       pyrazole-4-carboxamide
       (1-2) 3-(difluoromethyl)-N-{3'-fluoro-4'-[(E)-(methoxyimino) (2-3)
A = R
       (2E)-2-(2-{[6-(3-chloro-2-
       methyl]-1,1'-biphenyl-2-yl}-1-methyl-1H-
       methylphenoxy)-5-fluoro-4-pyrimidinyl]
       pyrazole-4-carboxamide
      oxv}phenv1)-2-(methoxvimino)-
       N-methvlethanamide
      (1-2) 3-(difluoromethy1)-N-{3'-fluoro-4'-[(E)-(methoxyimino) (2-4)
       trifloxystrobin
       methyl]-1,1'-biphenyl-2-yl}-1-methyl-1H-
       pyrazole-4-carboxamide
A-10
      (1-2) 3-(difluoromethyl)-N-(3'-fluoro-4-[(E)-(methoxyimino) (2-12)
       pyraclostrobin
       methyl]-1,1'-biphenyl-2-yl}-1-methyl-1H-
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```
pyrazole-4-carboxamide
A-11
      (1-3) 3-(trifluoromethyl)-N-{3'-fluoro-4'-[(E)-(methoxyimino) (2-1)
      azoxystrobin
      methvll-1,1'-biphenvl-2-vll-1-methvl-1H-
      pyrazole-4-carboxamide
      (1-3) 3-(trifluoromethyl)-N-{3'-fluoro-4'-[(E)-(methoxyimino) (2-2)
A-12
      fluoxastrobin
      methyl]-1,1'-biphenyl-2-yl}-1-methyl-1H-
      pvrazole-4-carboxamide
A-13
      (1-3) 3-(trifluoromethyl)-N-{3'-fluoro-4'-[(E)-(methoxyimino) (2-3)
      (2E)-2-(2-{[6-(3-chloro-2-
      methyl]-1,1'-biphenyl-2-yl}-1-methyl-1H-
      methylphenoxy)-5-fluoro-4-pyrimidinyl]
      pyrazole-4-carboxamide
      oxy}phenyl)-2-(methoxyimino)-
      N-methylethanamide
A-14
      (1-3) 3-(trifluoromethyl)-N-{3'-fluoro-4'-[(E)-(methoxyimino) (2-4)
      trifloxystrobin
      methyl]-1,1'-biphenyl-2-yl}-1-methyl-1H-
      pvrazole-4-carboxamide
A-15
      (1-3) 3-(trifluoromethyl)-N-(3'-fluoro-4'-[(E)-(methoxyimino) (2-12)
      pyraclostrobin
      methyl]-1,1'-biphenyl-2-yl}-1-methyl-1H-
      pyrazole-4-carboxamide
A-16
      (1-4) N-(3',4'-dichloro-1,1'-biphenyl-2-yl)-5-fluoro-
                                                                 (2-1)
      azoxystrobin
      1,3-dimethvl-1H-pyrazole-4-carboxamide
A-17
      (1-4) N-(3',4'-dichloro-1,1'-biphenyl-2-yl)-5-fluoro-
                                                                 (2-2)
      fluoxastrobin
      1,3-dimethyl-1H-pyrazole-4-carboxamide
A-18
      (1-4) N-(3', 4'-dichloro-1, 1'-biphenyl-2-yl)-5-fluoro-
                                                                 (2-3)
      (2E)-2-(2-{[6-(3-chloro-2-
      1,3-dimethyl-1H-pyrazole-4-carboxamide
      methylphenoxy)-5-fluoro-4-pyrimidinyl]
      oxy}phenyl)-2-(methoxyimino)-
      N-methylethanamide
A-19
      (1-4) N-(3',4'-dichloro-1,1'-biphenyl-2-yl)-5-fluoro-
                                                               (2-4)
      trifloxystrobin
      1.3-dimethyl-1H-pyrazole-4-carboxamide
A-20
      (1-4) N-(3,4'-dichloro-1,1'-biphenyl-2-yl)-5-fluoro- (2-12)
      pyraclostrobin
      1,3-dimethyl-1H-pyrazole-4-carboxamide
A-21
      (1-5) N-(4'-chloro-3'-fluoro-1,1'-biphenv1-2-v1)-2-
                                                               (2-1)
      azoxystrobin
      methyl-4-(trifluoromethyl)-1,3-thiazole-5-
      carboxamide
      (1-5) N-(4'-chloro-3'-fluoro-1,1'-bipheny1-2-y1)-2-
                                                                 (2-2)
A-22
      fluoxastrobin
      methyl-4-(trifluoromethyl)-1,3-thiazole-5-
      carboxamide
A-23
      (1-5) N=(4'-chloro-3'-fluoro-1,1'-biphenyl-2-yl)-2-
                                                            (2-3)
      (2E)-2-(2-{[6-(3-chloro-2-
      methyl-4-(trifluoromethyl)-1,3-thiazole-5-
      methylphenoxy)-5-fluoro-4-pyrimidinyl]
      carboxamide
      oxy}pheny1)-2-(methoxyimino)-
      N-methylethanamide
A-24
      (1-5) N-(4'-chloro-3'-fluoro-1,1'-bipheny1-2-y1)-2-
                                                                 (2-4)
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trifloxystrobin
       methyl-4-(trifluoromethyl)-1,3-thiazole-5-
       carboxamide
A-25
       (1-5) N-(4'-chloro-3'-fluoro-1,1'-biphenvl-2-vl)-2- (2-12)
       pyraclostrobin
       methyl-4-(trifluoromethyl)-1.3-thiazole-5-
       carboxamide
A-26
       (1-6) N-(4'-chloro-1,1'-biphenyl-2-yl)-4-(difluoromethyl)- (2-1)
       azoxystrobin
       2-methyl-1,3-thiazole-5-carboxamide
A-27
       (1-6) N-(4'-chloro-1,1'-biphenyl-2-yl)-4-(difluoromethyl)- (2-2)
       fluoxastrobin
       2-methyl-1,3-thiazole-5-carboxamide
A-28
       (1-6) N-(4'-chloro-1,1'-biphenyl-2-yl)-4-(difluoromethyl)- (2-3)
       (2E)-2-(2-{[6-(3-chloro-2-
       2-methvl-1,3-thiazole-5-carboxamide
       methylphenoxy)-5-fluoro-4-pyrimidinyl]
       oxy)phenyl)-2-(methoxyimino)-
       N-methylethanamide
A-29
       (1-6) N-(4'-chloro-1,1'-biphenvl-2-vl)-4-(difluoromethvl)- (2-4)
       trifloxystrobin
       2-methyl-1,3-thiazole-5-carboxamide
A-30
       (1-6) N-(4'-chloro-1,1'-biphenyl-2-yl)-4-(difluoromethyl)- (2-12)
       pyraclostrobin
       2-methyl-1,3-thiazole-5-carboxamide
A-31
       (1-7) N-(4'-bromo-1,1'-biphenv1-2-v1)-4-(difluoromethv1)-
                                                                   (2-1)
       azoxystrobin
       2-methyl-1,3-thiazole-5-carboxamide
A-32
       (1-7) N-(4'-bromo-1,1'-biphenyl-2-yl)-4-(difluoromethyl)-
                                                                   (2-2)
       fluoxastrobin
       2-methyl-1,3-thiazole-5-carboxamide
A-33
      (1-7) N-(4'-bromo-1,1'-biphenvl-2-vl)-4-(difluoromethvl)-
                                                                  (2-3)
       (2E)-2-(2-{[6-(3-chloro-2-
       2-methyl-1,3-thiazole-5-carboxamide
       methylphenoxy)-5-fluoro-4-pyrimidinyl]
       oxy}phenyl)-2-(methoxyimino)-
       N-methylethanamide
A-34
      (1-7) N-(4'-bromo-1,1'-biphenyl-2-yl)-4-(difluoromethyl)- (2-4)
       trifloxystrobin
       2-methyl-1,3-thiazole-5-carboxamide
A-35
       (1-7) N-(4'-bromo-1,1'-biphenyl-2-yl)-4-(difluoromethyl)-
                                                                   (2-12)
       pyraclostrobin
       2-methyl-1,3-thiazole-5-carboxamide
A-36
      (1-8) 4-(difluoromethyl)-2-methyl-N-[4'-(trifluoromethyl)- (2-1)
       azoxystrobin
       1,1'-biphenyl-2-yl]-1,3-thiazole-5-
       carboxamide
A-37 (1-8) 4-(difluoromethyl)-2-methyl-N-[4'-(trifluoromethyl)- (2-2)
       fluoxastrobin
       1,1'-biphenvl-2-vll-1,3-thiazole-5-
       carboxamide
A-38
     (1-8) 4-(difluoromethyl)-2-methyl-N-[4'-(trifluoromethyl)- (2-3)
       (2E)-2-(2-{[6-(3-chloro-2-
       1,1'-bipheny1-2-y1]-1,3-thiazole-5-
       methylphenoxy)-5-fluoro-4-pyrimidiny1]
       carboxamide
       oxy}pheny1)-2-(methoxyimino)-
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N-methylethanamide
A-39
       (1-8) 4-(difluoromethy1)-2-methy1-N-[4'-(trifluoromethy1)- (2-4)
       trifloxystrobin
       1,1'-biphenvl-2-vll-1,3-thiazole-5-
       carboxamide
      (1-8) 4-(difluoromethyl)-2-methyl-N-[4'-(trifluoromethyl)- (2-12)
A - 40
       pyraclostrobin
      1,1'-biphenyl-2-yl]-1,3-thiazole-5-
      carboxamide
A-41
      (1-1) N-(3', 4'-dichloro-5-fluoro-1,1'-biphenyl-2-yl)-3-
                                                                  (2-9)
      kresoxim-methvl
       (difluoromethyl)-1-methyl-1H-pyrazole-4-
       carboxamide
A-42
       (1-1) N-(3',4'-dichloro-5-fluoro-1,1'-bipheny1-2-y1)-3-
                                                                   (2-10)
       dimoxystrobin
       (difluoromethyl)-1-methyl-1H-pyrazole-4-
       carboxamide
A-43
       (1-1) N-(3', 4'-dichloro-5-fluoro-1,1'-bipheny1-2-y1)-3-
                                                                   (2-11)
       picoxystrobin
       (difluoromethyl)-1-methyl-1H-pyrazole-4-
       carboxamide
A-44
       (1-1) N-(3',4'-dichloro-5-fluoro-1,1'-biphenvl-2-vl)-3-
                                                                  (2-13)
      metominostrobin
       (difluoromethyl)-1-methyl-1H-pyrazole-4-
       carboxamide
A-45
       (1-7) N-(4'-bromo-1,1'-biphenyl-2-yl)-4-(difluoromethyl)-
                                                                  (2-9)
       kresoxim-methyl
       2-methvl-1,3-thiazole-5-carboxamide
A-46
       (1-7) N-(4'-bromo-1,1'-biphenvl-2-vl)-4-(difluoromethvl)-
                                                                   (2-10)
       dimoxystrobin
       2-methyl-1,3-thiazole-5-carboxamide
A-47
      (1-7) N-(4'-bromo-1,1'-biphenyl-2-yl)-4-(difluoromethyl)-
                                                                   (2-11)
       picoxystrobin
       2-methvl-1,3-thiazole-5-carboxamide
A-48
       (1-7) N-(4'-bromo-1,1'-biphenv1-2-v1)-4-(difluoromethv1)-
                                                                   (2-13)
       metominostrobin
       2-methyl-1,3-thiazole-5-carboxamide
A-49
      (1-8) 4-(difluoromethyl)-2-methyl-N-[4'-(trifluoromethyl)- (2-9)
       kresoxim-methyl
       1,1'-biphenv1-2-v1]-1,3-thiazole-5-
      carboxamide
A-50
      (1-8) 4-(difluoromethyl)-2-methyl-N-[4'-(trifluoromethyl)- (2-10)
      dimoxystrobin
       1,1'-bipheny1-2-y1]-1,3-thiazole-5-
       carboxamide
A-51
      (1-8) 4-(difluoromethyl)-2-methyl-N-[4'-(trifluoromethyl)- (2-11)
       picoxystrobin
       1,1'-biphenvl-2-vl]-1,3-thiazole-5-
       carboxamide
A-52
      (1-8) 4-(difluoromethyl)-2-methyl-N-[4'-(trifluoromethyl)- (2-13)
       metominostrobin
       1,1'-biphenvl-2-vl]-1,3-thiazole-5-
       carboxamide
A-53
      (1-9) N-(4'-chloro-3'-fluoro-1,1'-biphenyl-2-v1)-4-
                                                                  (2-9)
       kresoxim-methvl
       (difluoromethyl)-2-methyl-1,3-thiazole-5-
       carboxamide
A-54
      (1-9) N-(4'-chloro-3'-fluoro-1,1'-biphenyl-2-yl)-4-
                                                                  (2-10)
       dimoxystrobin
      (difluoromethyl)-2-methyl-1,3-thiazole-5-
      carboxamide
A-55
     (1-9) N-(4'-chloro-3'-fluoro-1,1'-bipheny1-2-y1)-4-
                                                                  (2-11)
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picoxystrobin
       (difluoromethyl)-2-methyl-1,3-thiazole-5-
      carboxamide
      (1-9) N-(4'-chloro-3'-fluoro-1,1-biphenyl-2-yl)-4- (2-13)
A-56
       metominostrobin
      (difluoromethyl)-2-methyl-1,3-thiazole-5-
      carboxamide
A-57 (1-9) N-(4'-chloro-3'-fluoro-1,1'-biphenyl-2-yl)-4-
                                                              (2-1)
      azoxystrobin
      (difluoromethyl)-2-methyl-1,3-thiazole-5-
      carboxamide
A-58
      (1-9) N-(4'-chloro-3'-fluoro-1,1'-bipheny1-2-y1)-4-
                                                                 (2-2)
       fluoxastrobin
       (difluoromethyl)-2-methyl-1,3-thiazole-5-
      carboxamide
A-59
      (1-9) N-(4'-chloro-3'-fluoro-1,1'-biphenvl-2-vl)-4-
                                                                 (2-3)
       (2E)-2-(2-{[6-(3-chloro-2-
       (difluoromethyl)-2-methyl-1,3-thiazole-5-
       methylphenoxy)-5-fluoro-4-pyrimidinyl]
       carboxamide
      oxy)phenvl)-2-(methoxvimino)-
      N-methylethanamide
A-60
      (1-9) N-(4'-chloro-3'-fluoro-1,1'-biphenyl-2-v1)-4-
                                                                 (2-4)
       trifloxystrobin
       (difluoromethyl)-2-methyl-1,3-thiazole-5-
      carboxamide
     (1-9) N-(4'-chloro-3'-fluoro-1,1'-bipheny1-2-y1)-4-
                                                                 (2-12). .
A-61
SUMM
       . . . active compound of the formula (I): mixing partner.
TABLE 21
Mixing ratios
                                                       Particularly
                                    Preferred
                                                      preferred
Mixing partner
                                    mixing ratio
                                                      mixing ratio
Group (3): triazoles except for (3-15) 50:1 to 1:50 20:1 to 1:20 (3-15): grothioconazole
                                                      20:1 to 1:20
SUMM
       The fact that the active compound combinations are well tolerated by
      plants at the concentrations required for controlling
       plant diseases permits a treatment of entire plants
       (above-ground parts of plants and roots), of propagation stock
       and seed, and of the soil. The active compound combinations according to
       the invention can. .
SUMM
       . . are also suitable for increasing the yield of crops. In
      addition, they show reduced toxicity and are well tolerated by
      plants.
SUMM
       According to the invention, it is possible to treat all plants
       and parts of plants. Plants are to be understood
       here as meaning all plants and plant populations,
       such as desired and undesired wild plants or crop
       plants (including naturally occurring crop plants).
      Crop plants can be plants which can be obtained by
       conventional breeding and optimization methods or by biotechnological
       and genetic engineering methods or combinations of these methods,
      including the transgenic plants and including plant
      cultivars which can or cannot be protected by plant breeders'
      certificates. Parts of plants are to be understood as meaning
      all above-ground and below-ground parts and organs of plants,
```

such as shoot, leaf, flower and root, examples which may be mentioned being leaves, needles, stems, trunks, flowers, fruit bodies, fruits and seeds and also roots, tubers and rhizomes. Parts of plants also include harvested material and vegetative and generative propagation material, for example seedlings, tubers, rhizomes, cuttings and seeds.

SUMM The treatment of the plants and parts of plants according to the invention with the active compounds is carried out directly or by action on their environment, habitat or. . . .

As already mentioned above, it is possible to treat all plants and their parts according to the invention. In a preferred embodiment, wild plant species and plant cultivars, or those obtained by conventional biological breading, such as crossing or protoplast fusion, and parts thereof, are treated. In a further preferred embodiment, transgenic plants and plant cultivars obtained by genetic engineering, if appropriate in combination with conventional methods (genetically modified organisms), and parts thereof, are treated. The term "parts" or "parts of plants" or "plant parts" has been explained above.

SUMM Particularly preferably, plants of the plant cultivars which are in each case commercially available or in use are treated according to the invention.

SUMM Depending on the plant species or plant cultivars, their location and growth conditions (soils, climate, vegetation period, diet), the treatment according to the invention may also result in superadditive ("synergistic") effects. Thus, . . and/or an increase in the activity of the substances and compositions which can be used according to the invention, better plant growth, increased tolerance to high or low temperatures, increased tolerance to drought or to water or soil salt content,

SUMM

increased flowering. . . The transgenic plants or plant cultivars (i.e. those obtained by genetic engineering) which are preferably to be treated according to the invention include all plants which, in the genetic modification, received genetic material which imparted particularly advantageous useful properties ("traits") to these plants. Examples of such properties are better plant growth, increased tolerance to high or low temperatures, increased tolerance to drought or to water or soil salt content, increased flowering. . . and/or processability of the harvested products. Further and particularly emphasized examples of such properties are a better defence of the plants against animal and microbial pests, such as against insects, mites, phytopathogenic fungi, bacteria and/or viruses, and also increased tolerance of the plants to certain herbicidally active compounds. Examples of transgenic plants which may be mentioned are the important crop plants, such as cereals (wheat, rice), maize, soya beans, potatoes, cotton, oilseed rape and also fruit plants (with the fruits apples, pears, citrus fruits and grapes), and particular emphasis is given to maize, soya beans, potatoes, cotton and oilseed rape. Traits that are emphasized in particular are increased defence of the plants against insects, by toxins formed in the plants , in particular those formed in the plants by the genetic material from Bacillus thuringiensis (for example by the genes CryIA(a), CryIA(b), CryIA(c), CryIIA, CryIIIA, CryIIIB2, Cry9c, Cry2Ab, Cry3Bb and CryIF and also combinations thereof) (hereinbelow referred to as "Bt plants"). Traits that are furthermore particularly emphasized are the increased tolerance of the plants to certain herbicidally active compounds, for example imidazolinones, sulphonylureas, glyphosates or phosphinotricin (for example the "PAT" gene). The genes which impart the desired traits in question can also be

present in combinations with one another in the transgenic

plants. Examples of "Bt plants" which may be mentioned are maize varieties, cotton varieties, soya bean varieties and potato varieties which are sold under the. . . soya bean), KnockOut® (for example maize), StarLink® (for example maize), Bollgard® (cotton), Nucoton® (cotton) and NewLeaf® (potato). Examples of herbicide-tolerant plants which may be mentioned are maize varieties, cotton varieties and soya bean varieties which are sold under the trade names. . . (tolerance to phosphinotricin, for example oilseed rape), IMI® (tolerance to imidazolinones) and STS® (tolerance to sulphonylureas, for example maize). Herbicide-resistant plants (plants bred in a conventional manner for herbicide tolerance) which may be mentioned also include the varieties sold under the name Clearfield® (for example maize). Of course, these statements also apply to plant cultivars which have these genetic traits or genetic traits still to be developed, and which will be developed and/or marketed. . .

SUMM . . . these formulations, be present as a mixture with other active compounds, such as insecticides, attractants, sterilants, bactericides, acaricides, nematicides, fungicides, growth regulators or herbicides.

SUMM . . . can be varied within a relatively wide range, depending on the kind of application. In the treatment of parts of plants, the application rates of active compound combinations are generally between 0.1 and 10 000 g/ha, preferably between 10 and 1000. . .

DETD To test for curative activity, young plants are sprayed with a conidia suspension of Pyrenophora teres. The plants remain in an incubation cabinet at 20° C. and 100% relative atmospheric humidity for 48 hours. The plants are then sprayed with the preparation of active compound at the stated application rate.

DETD The plants are placed in a greenhouse at a temperature of a plant 20° C. and a volative atmospheric humidity of spout 20° C. and a volative atmospheric humidity of spout 20° C.

about 20° C. and a relative atmospheric humidity of about 80%. DETD . . . teres test (barley)/curative

Application

Active compounds		Efficacy in % found* calc.*
(1-1)	25	43
(2-2) fluoxastrobin	25	0
(3-17) tebuconazole	25	29
(1-1) + (2-2) fluoxastrobin (1:1)	25 + 25	71 43
(1-1) + (3-17) tebuconazole (1:1)	25 + 25	71 60

\*found = activity found

\*\*calc. =. .

DETD To test for protective activity, young plants are sprayed with the preparation of active compound at the stated application rate. After the spray coating has dried on, the plants are dusted with spores of Ervsibhe gramminie f.sp. hordei.

DETD Plants are placed in a greenhouse at a temperature of about 20° C. and a relative atmospheric humidity of about 80%. .

DETD To test for curative activity, young plants are sprayed with a conidia suspension of Puccinia recondita. The plants remain in an incubation cabinet at 20°C. and 100% relative atmospheric humidity for 48 hours.

DETD The plants are then sprayed with the preparation of active compound at the stated application rate.

DETD The plants are placed in a greenhouse at a temperature of about 20° C. and a relative atmospheric humidity of about 80%. .

DETD To test for curative activity, young plants are sprayed with a conidia suspension of Gibberella zeae. The plants remain in an incubation cabinet at 22° C. and 100% relative atmospheric

humidity for 24 hours. The plants are then sprayed with the preparation of active compound at the stated application rate. After the spray coating has dried on, the plants remain in a greenhouse under translucent incubation hoods at a temperature of about 22° C. and a relative atmospheric humidity.

DETD To test for protective activity, young plants are sprayed

with the preparation of active compound at the stated application rate. After the spray coating has dried on, the plants are

inoculated with an aqueous spore suspension of Sphaerotheca fuliginea.

The plants are then placed in a greenhouse at about

DETD The plants are then placed in a greenhouse at about 23° C. and a relative atmospheric humidity of about 70%.

DETD . . . compound in g/ha found\* calc.\*\*

(1-1)	4	30	
	4 2	36	
	1	16	
	0.5	0	
(1-7)	2	0	
<b>(-</b> ,	1	0	
	0.5	0	
(2-1) azoxystrobin	0.5	20	
(2-2) fluoxastrobin		0	
(2-4) trifloxystrobin	1 2	10	
(2-12) pyraclostrobin	2	0	
(3-15) prothioconazole	1	43	
(3-17) tebuconazole	2 1 1	10	
(3-21) bitertanol	1	0	
(4-2) tolylfluanid	20	0	
(6-6) 20 11			
(9-3) pyrimethanil	20	0	
(12-4) iprodione	20	0	
(19-2) chlorothalonil	20	0	
(19-10) spiroxamine	20	0	
(22-1)	2	11	
(22-2)	1	22	
(1-1) + (2-1) azoxystrobin (1:1)	0.5 + 0.5	87	20
(1-7) + (2-1) azoxystrobin (1:1)		63	20
(1-1) + (2-2) fluoxastrobin (1:1)	1 + 1	95	16
(1-7) + (2-2) fluoxastrobin (1:1)	1 + 1	92	0
(1-1) + $(2-4)$ trifloxystrobin $(1:1)$	) 2 + 2	57	42
(1-7) + (2-4) trifloxystrobin (1:1	) 2		

DETD To test for protective activity, young plants are sprayed with the preparation of active compound at the stated application rate. After the spray coating has dried on, the plants are

inoculated with an aqueous spore suspension of Alternaria solani.

DETD The plants are then placed in an incubation cabinet at about

20° C. and 100% relative atmospheric humidity.

DBID To test for protective activity, young plants are sprayed with the preparation of active compound at the stated application rate. After the spray coating has dried on, the plants are inoculated with an aqueous spore suspension of Phytophthora infestans. The plants are then placed in an incubation cabinet at about 20° C. and 10% relative atmospheric humdid:

DETD To test for protective activity, young plants are sprayed with the preparation of active compound at the stated application rate. After the spray coating has dried on, 2 small places of agar colonized by Botrytis cinerea are placed onto each leaf. The inoculated plants are placed in a darkened chamber at about 20° C. and 100% relative atmospheric humidity.

DETD 0% means an efficacy which corresponds to the growth in the controls, whereas an efficacy of 100% means that no fungal growth is observed.

- DETD 0% means an efficacy which corresponds to the growth in the controls, whereas an efficacy of 100% means that no fungal growth is observed.
- DETD 0% means an efficacy which corresponds to the growth in the controls, whereas an efficacy of 100% means that no fungal growth is observed.
- DETD Gherkin plants (Vert petit de Paris cultivar) are sown in starter cups on 50/50 peat soil/pozzolana soil substrate and cultivated at 20° C./23° C. At the 2-leaf stage, the plants are sprayed with the preparation of active compound at the stated application rate.
- DETD To test for protective activity, the plants are, after 24 h, sprayed with an aqueous spore suspension of Sphaerotheca fuliginea (100 000 spores/ml). The plants then remain at 20° C./25° C. and 60/70% relative atmospheric humidity.
- CLM What is claimed is:
- CLM What is claimed is:

tetraconazole.

- according to claim 1, where the active compounds of groups (2) to (23) are selected from the list below: (2-1) azoxystrobin (2-2) fluoxastrobin (2-3) (2E)-2-(2-{[6-(3-chloro-2methylphenoxy)-5-fluoro-4-pyrimidinyl]oxy}phenyl)-2(methoxyimino)-Nmethylethanamide (2-4) trifloxystrobin (2-5) (2E)-2-(methoxyimino)-N $methv1-2-(2-\{[(\{(1E)-1-[3-(trifluoromethv1)$ phenyllethylidenlamino)oxylmethyllphenyl)ethanamide (2-6)  $(2E)-2-(methoxyimino)-N-methyl-2-\{2-[(E)-(\{1-[3-(trifluoromethyl)phenyl]$ ethoxy}imino)methyl]phenyl}ethanamide (2-7) orysastrobin (2-8) 5-methoxy-2-methyl-4-(2-{[({(1E)-1-[3-(trifluoromethyl)phenyl]ethyliden} amino)oxy]methyl}phenyl)-2,4-dihydro-3H-1,2,4-triazol-3-one (2-9) kresoxim-methyl (2-10) dimoxystrobin (2-11) picoxystrobin (2-12) pyraclostrobin (2-13) metominostrobin (3-1) azaconazole (3-2) etaconazole (3-3) propiconazole (3-4) difenoconazole (3-5) bromuconazole (3-6) cyproconazole (3-7) hexaconazole (3-8) penconazole (3-9) myclobutanil (3-10)
- IT 87-41-2D, Phthalide, mixture with carboxamide derivative 133-06-2D, Captan, mixture with carboxamide derivative 133-07-3D, Folpet, mixture with carboxamide
- derivative 137-26-8D, Thiram, mixture with carboxamide derivative 137-30-4D.
  - Ziram, mixture with carboxamide derivative 148-79-8D, Thiabendazole, mixture with carboxamide derivative 731-27-1D, mixture with carboxamide derivative 1018-71-9D, Pyrrolnitrine, mixture with carboxamide derivative 1085-98-9D, mixture with carboxamide derivative 1332-40-7D, Copper oxychloride, mixture with carboxamide derivative 1993-77-7D, Dodemorph, mixture with carboxamide derivative 1897-45-6D, Chlorothalonil, mixture with carboxamide derivative 2425-06-1D, Captafol, mixture with carboxamide derivative 2439-10-31D.
- Dodine,
  - mixture with carboxamide derivative 3347-22-6D, Dithianone, mixture with carboxamide derivative 3878-19-1D, Fuberidazole, mixture with carboxamide derivative 5234-68-4D, Carboxin, mixture with carboxamide derivative 6880-18-3D, Kasugamycin, mixture with carboxamide derivative 8018-01-7D, Mancozeb, mixture with carboxamide derivative 9006-42-2D, Metiram, mixture
  - carboxamide derivative 10605-21-7D, Carbendazim, mixture with carboxamide derivative 12071-83-9D, Propineb, mixture with carboxamide derivative 12122-67-7D, Zineb, mixture with carboxamide derivative 12427-38-2D, Maneb, mixture with carboxamide derivative 13598-36-2D, Phosphonic acid, mixture

carboxamide derivative 17109-49-8D, Edifenphos, mixture with carboxamide derivative 17804-35-2D, Benomyl, mixture with carboxamide derivative 20427-59-2D, Copper hydroxide, mixture with carboxamide derivative 23564-06-8D, Thiophanatemethyl, mixture with carboxamide derivative 23564-06-9D, Thiophanateethyl, mixture with carboxamide derivative 24579-73-5D, Propamocarb, mixture with carboxamide derivative 27605-76-1D, Propenazole, mixture with carboxamide derivative 27605-76-1D, Probenazole, mixture with carboxamide derivative 32809-16-8D, Procymidone, mixture with carboxamide derivative 39148-24-8D, FosetylAl, mixture with carboxamide derivative 41814-78-2D, Tricyclazole, mixture with carboxamide derivative 41814-78-2D, Tricyclazole, mixture with carboxamide derivative 43121-43-3D, Triadimefon, mixture with carboxamide derivative 50471-44-8D, Vinclozolin, mixture with carboxamide derivative 50512-35-1D, mixt

Isoprothiolane,

mixture with carboxamide derivative 51832-87-2D, Picobenzide, mixture with carboxamide derivative 53112-28-0D, mixture with carboxamide derivative 55179-31-2D, Bitertanol, mixture with carboxamide derivative 55219-65-3D, Triadimenol, mixture with carboxamide derivative 57520-17-9D, Iminoctadine triacetate, mixture with carboxamide derivative 57966-95-7D, Cymoxamil,

mixture

with carboxamide derivative 60207-31-0D, Azaconazole, mixture with carboxamide derivative 60207-90-1D, Propiconazole, mixture with carboxamide derivative 60207-93-4D, Etaconazole, mixture with carboxamide derivative 65571-68-8D, Clorofenazole, mixture with carboxamide derivative 66063-05-6D. Pencycuron, mixture with carboxamide derivative 66246-88-6D, Penconazole, mixture with carboxamide derivative 67564-91-4D, Fenpropimorph, mixture with carboxamide derivative 67747-09-5D, Prochloraz, mixture with carboxamide derivative 69516-34-3D, mixture with carboxamide derivative 70630-17-0D, Metalaxvl-M, mixture with carboxamide derivative 72459-58-6D, Triazoxide, mixture with carboxamide derivative 74738-17-3D, Fenpiclonil, mixture with carboxamide derivative 76674-21-0D, Flutriafol, mixture with carboxamide derivative 77732-09-3D, Oxadixyl, mixture with carboxamide derivative 79048-45-6D, mixture with carboxamide derivative 79622-59-6D, Fluazinam, mixture with carboxamide derivative 79983-71-4D, Hexaconazole, mixture with carboxamide derivative 81412-43-3D, Tridemorph, mixture with carboxamide derivative 85509-19-9D, Flusilazole, mixture with carboxamide derivative 87130-20-9D, Diethofencarb, mixture with carboxamide derivative 88671-89-0D, Myclobutanil, mixture with carboxamide derivative 89269-64-7D, Ferimzone, mixture with carboxamide derivative 91315-15-0D, Aldimorph, mixture with carboxamide derivative 94361-06-5D, Cyproconazole, mixture with carboxamide derivative 97716-85-3D, mixture with carboxamide derivative Benalaxvl-M, mixture with carboxamide derivative 101903-30-4D, Pefurazoate, mixture with carboxamide derivative 103970-75-8D, Ouinconazole, mixture with carboxamide derivative 104030-54-8D, Carpropamid, mixture with carboxamide derivative 107534-96-3D, Tebuconazole, mixture with carboxamide derivative 108173-90-6D, Guazatine, mixture with carboxamide derivative 110235-47-7D, mixture with carboxamide derivative 110488-70-5D, Dimethomorph, mixture with carboxamide derivative 112281-77-3D, Tetraconazole, mixture with carboxamide derivative 114369-43-6D. Fenbuconazole, mixture with carboxamide derivative 115852-48-7D, Fenoxanil, mixture with carboxamide derivative 116255-48-2D, Bromuconazole, mixture with carboxamide derivative 117428-22-5D, 118134-30-8D, Picoxystrobin, mixture with carboxamide derivative

Spiroxamine,

mixture with carboxamide derivative 119446-68-3D, Difenoconazole, mixture

with

carboxamide derivative 119899-14-80, mixture with carboxamide derivative 120116-88-3D, Cyazofamid, mixture with carboxamide derivative 121552-61-2D, mixture with carboxamide derivative 12516-23-6D, Metconazole, mixture with carboxamide derivative 12516-23-6D, Metconazole, mixture with carboxamide derivative 125225-28-7D, Ipconazole, mixture with carboxamide derivative 12633-17-8D, Fenhexamid, mixture with carboxamide derivative 3131341-86-1D, Tuloutoxonil, mixture with carboxamide derivative 313152-26-6D, mixture with

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carboxamide derivative 131807-57-3D, Famoxadone, mixture with carboxamide
                 131860-33-8D, Azoxystrobin, mixture with carboxamide derivative
     131983-72-7D, Triticonazole, mixture with carboxamide derivative
     133408-50-1D, Metominostrobin, mixture with carboxamide derivative
     133855-98-8D, Epoxiconazole, mixture with carboxamide derivative
     135158-54-2D, Acibenzolar-S-methyl, mixture with carboxamide derivative
     136426-54-5D, Fluquinconazole, mixture with carboxamide derivative
     139920-32-4D, Diclocymet, mixture with carboxamide derivative
     Iprovalicarb, mixture with carboxamide derivative 141517-21-7D,
     Trifloxystrobin, mixture with carboxamide derivative 143390-89-0D.
     Kresoximmethyl, mixture with carboxamide derivative 149508-90-7D,
     Simeconazole, mixture with carboxamide derivative 149961-52-4D,
     Dimoxystrobin, mixture with carboxamide derivative 156052-68-5D, Zoxamide,
     mixture with carboxamide derivative 156581-89-4D, mixture with carboxamide
     derivative 158169-73-4D, mixture with carboxamide derivative 161326-34-7D,
     Fenamidone, mixture with carboxamide derivative 162650-77-3D, Ethaboxam,
     mixture with carboxamide derivative 169202-06-6D, Iminoctadine
     tris(albesilate), mixture with carboxamide derivative 175013-18-0D,
     Pyraclostrobin, mixture with carboxamide derivative 175217-20-6D,
Silthiofam,
     mixture with carboxamide derivative 178928-70-6D, Prothioconazole, mixture
     carboxamide derivative 181624-76-0D, mixture with carboxamide derivative
     181627-13-4D, mixture with carboxamide derivative 183675-82-3D,
Penthiopyrad,
     mixture with carboxamide derivative 183676-44-0D, mixture with carboxamide
     derivative 187233-48-3D, mixture with carboxamide derivative 188027-78-3D,
     mixture with carboxamide derivative 188425-85-6D, Boscalid, mixture
     with carboxamide derivative 189873-26-5D, mixture with carboxamide
derivative
                                                       214706-53-3D, mixture with
     210230-99-2D, mixture with carboxamide derivative
     carboxamide derivative 220899-03-6D, Metrafenone, mixture with carboxamide
     derivative 221451-58-7D, mixture with carboxamide derivative 221667-31-8D,
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mixture with carboxamide derivative 223580-51-6D, Tiadinil, mixture with carboxamide derivative 224049-04-1D, mixture with carboxamide derivative 237055-17-3D, mixture with carboxamide derivative 248593-16-0D, Orysastrobin,

with

mixture with carboxamide derivative 249648-16-6D, mixture with carboxamide derivative 308286-29-5D, mixture with carboxamide derivative 361377-29-9D, Fluoxastrobin, mixture with carboxamide derivative 367262-88-2D, mixture

with carboxamide derivative 367262-94-0D, mixture with carboxamide derivative 367262-97-3D, mixture with carboxamide derivative 367263-03-4D, mixture with carboxamide derivative 374726-62-2D, mixture with carboxamide derivative 413615-35-7D, Benthiavalicarb, mixture with carboxamide derivative 424824-17-9D, mixture with carboxamide derivative 424831-80-1D, mixture with carboxamide derivative 497934-59-5D, mixture with carboxamide derivative 497934-60-8D, mixture with carboxamide derivative 577954-87-1D, mixts, with funcicides 577954-88-2D, mixts, with funcicides 577954-96-2D, mixts. with fungicides 581809-46-3D, mixts. with fungicides 756523-12-3D, mixture with carboxamide derivative 849674-14-2 849674-16-4 849674-17-5 849674-20-0 849674-22-2 849674-24-4 849674-26-6 849674-29-9 849674-33-5 849674-35-7 849674-38-0 849674-44-8 849674-31-3 849674-45-9 849674-48-2 849674-51-7 849674-54-0 849674-56-2 849674-57-3 849674-58-4 849674-59-5 849674-60-8 849674-61-9 849674-62-0 849674-63-1 849674-65-3 849674-67-5 849674-69-7 849674-71-1 849674-712-2 849674-73-3 849674-74-4 849674-75-5 849674-77-7 849674-78-8 849674-77-7 7. mixture 7-7, m with carboxamide derivative 849674-86-8D, mixture with carboxamide

derivative

849674-87-9D, mixture with carboxamide derivative 849674-88-0D, mixture with carboxamide derivative

## (synergistic fungicidal combination)

L9 ANSWER 15 OF 22 USPATFULL on STN

ACCESSION NUMBER: 2006:248181 USPATFULL

TITLE: Method of plant growth promotion

using amide compounds

INVENTOR(S): Buberl, Jan, Triangle, NC, UNITED STATES
Broscious, Steven, Triangle, NC, UNITED STATES

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PATENT INFORMATION: US 20062 APPLICATION INFO.: US 2004-

NUMBER KIND DATE

US 2006211574 A1 20060921
US 2004-568510 A1 20040715 (10)
WO 2004-82P7872 20040715

20060216 PCT 371 date

NUMBER DATE

PRIORITY INFORMATION: US 2003-497717P 20030826 (60)

DOCUMENT TYPE: Utility

FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: BIRCH STEWART KOLASCH & BIRCH, PO BOX 747, FALLS

CHURCH, VA, 22040-0747, US

NUMBER OF CLAIMS: 14
EXEMPLARY CLAIM: 1
LINE COUNT: 679

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A method for treating plants in need of growth

promotion, comprising applying to said plants, to the seeds from which they grow or to the locus in which they grow, a

non-phytotoxic, effective plant growth promoting

amount of an amide compound having the formula A-CO--NR.sup.1R.sup.2 in which A is an aryl group or an aromatic or non-aromatic, 5- or

6-membered heterocycle which has from 1 to 3 hetero atoms which are selected from 0, N and S; where the aryl group or the heterocycle may or may not have 1, 2 or 3 substituents which are selected, independently of one another, from alkyl, halogen, CHF.sub.2, CF.sub.3, alkoxy,

one another, from alkyl, halogen, tHf.sub.2, tC.sub.3, alkoxy, haloalkoxy, alkylthio, alkylsulfinyl and alkylsulfonyl; R.sup.1 is a hydrogen atom; R.sup.2 is a phenyl or cycloalkyl group which may or may not have 1, 2 or 3 substituents which are selected, independently of one another, from alkyl, alkenyl, alkynyl, alkoxy, alkenyloxy, alkynyloxy, cycloalkyl, cycloalkyl, cycloalkyloxy, cycloalkenyloxy, phenyl and halogen, where the aliphatic and cycloaliphatic radicals may be partially or fully halogenated and/or the cycloaliphatic radicals may be substituted by from 1 to 3 alkyl groups and where the phenyl group may have from 1 to 5 halogen atoms and/or from 1 to 3 substituents which are selected, in dependently of one another, from alkyl, haloalkyl, alkoxy,

haloalkoxy, alkylthio and haloalkylthio, and where the amidic phenyl group may or may not be condensed with a saturated 5-membered ring which may or may not be substituted by one or more alkyl groups and/or may have a hetero atom selected from 0 and S.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 188425-85-6, Boscalid 203924-02-1, BAS 516

<sup>(</sup>plant growth stimulator)

RN 188425-85-6 USPATFULL

CN 3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-bipheny1]-2-y1)- (CA INDEX NAME)

RN 203924-02-1 USPATFULL

CN Carbamic acid, N-[2-[[[1-(4-chlorophenyl)-1H-pyrazol-3yl]oxy]methyl]phenyl]-N-methoxy-, methyl ester, mixt. with 2-chloro-N-(4'-chloro[1,1'-biphenyl]-2-yl)-3-pyridinecarboxamide (CA INDEX NAME)

CM

1

CRN 188425-85-6 CMF C18 H12 C12 N2 O

CM

CRN 175013-18-0 CMF C19 H18 C1 N3 O4

- TI Method of plant growth promotion using amide compounds
- AB A method for treating plants in need of growth promotion, comprising applying to said plants, to the seeds from which they grow or to the locus in which they grow, a non-phytotoxic, effective plant growth promoting amount of an amide compound having the formula A-CO--NR.sup.1R.sup.2 in

which A is an aryl group or an aromatic.

The present invention relates to a new method of plant treatment that is able to induce positive growth regulating responses.

SUMM The term "method for regulating plant

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growth" or the term "growth regulation process" or the
use of the words "growth regulation" or other terms using the
word "regulate" as used in the instant specification mean a variety of
plant responses which attempt to improve some characteristic of
the plant as distinguished from pesticidal action, the
intention of which is to destroy or stunt a growth of a
plant or a living being. For this reason the compounds used in
the practice of this invention are used in amounts which are
non-phytotoxic with respect to the plant being treated.
. . . precisely, the present invention relates to the use of certain
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- SUMM amide compounds, in particular nicotinamide compounds in order to induce growth-regulating responses.
- SUMM EP-A 0545099 describes amide derivatives and their use to combat Botrytis. Nothing is disclosed with regard to a plant growth promotion effect.
- STIMM It is an object of the present invention to provide a method of plant growth in order to obtain better plants , higher crop yield, better crop quality and better conditions of agricultural practices.
- SUMM We have found that this object is achieved by a method for treating plants in need of growth promotion, comprising applying to said plants, to the seeds from which they grow or to the locus in which they grow, a non-phytotoxic, effective plant growth promoting amount of an amide compound having the formula I A-CO--NR.sup.1R.sup.2 I
- A is an aryl group.
- SUMM The amide compounds used in the method of the present invention have been found to display a wide variety of plant growth regulating properties, depending upon the concentration used, the formulation employed and the type of plant species treated.
- SUMM By virtue of the practice of the present invention a wide variety of plant growth responses, including the following:
- SUMM j) increase in plant height
- SUMM o) increased shoot growth
  - p) improved plant vigour
- SUMM SUMM It is intended that as used in the instant specification the term
  - "method for regulating plant growth" means the achievement of any of the aforementioned 16 categories of response as well as any other modification of plant, seed, fruit, vegetable, whether the fruit or vegetable is un-harvested or has been harvested, so long as the net result is to increase growth and quality or benefit any property of the plant, seed, fruit or vegetable as distinguished from any pesticidal action. The term "fruit" as used in the instant specification is to be understood as meaning anything of economic value that is produced by the plant.
- SUMM . . . compounds according to the invention may also be present in combination with other active compounds, for example with herbicides, insecticides, growth regulators, fungicides or else with fertilizers. In many cases, a mixture of the amide compounds I, or of the compositions comprising them, in the use form as growth promotors with other active compounds results in a broader spectrum of activity.
- SUMM . salts, 2,6-dimethyl-N-cyclododecylmorpholine or its salts, N-[3-(p-tert-butylphenyl)-2-methylpropyl]-cis-2,6-dimethylmorpholine, N-[3-(p-tert-butylphenyl)-2-methyl-propyl]piperidine, 1-[2-(2,4-dichlorophenyl)-4-ethyl-1,3-di-oxolan-2-yl-ethyl]-1H-1,2,4triazole, 1-[2-(2,4-dichlorophenyl)-4-n-propyl-1,3-dioxolan-2-ylethyl]-1H-1, 2, 4-triazole, N-(n-propy1)-N-(2, 4, 6-trichlorophenoxyethy1)-N'imidazolylurea, 1-(4-chlorophenoxy)-3,3-dimethyl-1-(1H-1,2,4-triazol-1yl)-2-butanone, 1-(4-chlorophenoxy)-3,3-dimethyl-1-(1H-1,2,4-triazol-1y1)-2-butanol, (2RS, 3RS)-1-[3-(2-chloro-pheny1)-2-(4-

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5-butyl-2-dimethylamino-4-hydroxy-6-methylpyrimidine,
       bis(p-chlorophenyl)-3-pyridinemethanol, 1,2-bis(3-ethoxycarbonyl-2-
       thioureido) benzene, 1,2-bis-(3-methoxycarbonyl-2-thioureido) benzene;
     strobilurins, such as methyl E-methoximino-[α-(o-tolyloxy)-o-
       tolyl]acetate, methyl E-2-{2-[6-(2-cyanophenoxy)-pyridimin-4-yloxy]-
       phenyl}-3-methoxyacrylate, methyl E-methoximino-[\alpha-(2-
       phenoxyphenyl) lacetamide, methyl E-methoximino-[α-(2,5-
       dimethylphenoxy)-o-tolyllacetamide;
 anilinopyrimidines, such as N-(4,6-dimethylpyrimidin-2-yl)aniline,
       N-[4-methyl-6-(1-propynyl)pyrimidin-2-yl]aniline, N-(4-methyl-6-
       cyclopropylpyrimidin-2-yl)aniline;
 phenylpyrroles, such.
SŪMM
       As examples of crops that might be modifild by plant
       growth promotion action, there are vegetables, nuts or fruits.
SUMM
       A further aspect of the present invention is, that mixtures of the
       amide compounds of the formula I with strobilurins are
       suitable in the method of plant growth promotion.
SUMM
       Suitable Strobilurins for these mixtures are for example
       azoxystrobin, dimoxystrobin, fluoxastrobin,
       kresoxim-methyl, metominostrobin, orvsastrobin, picoxystrobin,
       pyraclostrobin or trifloxystrobin.
SUMM
       Amide compound I and strobilurin are preferably employed in a
       weight ratio in the range of from 20:1 to 1:20, in particular from 10:1
       The amide compounds of the formular I and the strobilurin may
SUMM
       be applied simultaneously, that is either together or separately, or in
       succession.
       As examples of crops that might be modified by plant
SUMM
       growth regulating action, there are vegetables, nuts
       or fruits.
SUMM
       The precise amount of amide compound will depend upon the particular
       plant species being treated. This may be determined by the man
       skilled in the art with a few experiments and may vary in plant
       responses depending upon the total amount of compound used, as well as
       the particular plant species, which is being treated. Of
       course, the amount of amide compound should be non-phytotoxic with
       respect of the plant being treated.
SUMM
       . . . application of the amide compounds used in the process of this
       invention is directly to the foliage and stems of plants, it
       as been deemed that such compounds may be applied to the soil in which
       the plants are growing, and that such compounds will be
       root-absorbed to a sufficient extent so as to result in plant
       responses in accordance with the teachings of this invention.
SUMM
       The following examples are illustrative of methods of plant
       growth regulation according to the invention, but should not be
       understood as limiting the said instant invention.
DETD
       . . . an adjuvant at 0.06% the onions were treated 5 times every 7
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fluorophenyl)oxiran-2-ylmethyl]-1H-1,2,4-triazole  $\alpha$ -(2-chlorophenyl)- $\alpha$ -(4-chlorophenyl)-5-pyrimidine-methanol,

increased by 21% compared to the untreated plot. In this. . . . . through to harvest. Limited diseases pressure was present in this trial. A 11.8 times higher yield was observed with following plant growth regulating effect: bigger berries, increased weight cluster, greener plants and higher plants.

. . . canola was treated so as to have a dose of 0.26 lbs per acre

days after the first treatment. During this time plants were properly watered. 14 days after the last treatment, the crop yield was

of active ingredient. During the trial plants were properly watered. 58 days after the last treatment or 105 days after sowing the plants, the crop yield was measured. The crop yield per acre

measured. The crop yield per acre increased.

DETD

- CLM What is claimed is:

  1. A method for treating plants in need of growth
  promotion, comprising applying to said plants, to the seeds
  from which they grow or to the locus in which they grow, a
  non-phytotoxic, effective plant growth promoting
  amount of an amide compound having the formula I A-CO-NR.sup.1R.sup.2
  I in which A is an aryl group or.
- CLM What is claimed is:

  6. A method according to claim 1, wherein the plant growth promoting amount of the amide compound of formula (I) applied is sufficient to provide at least one plant growth promoting effect selected from the group consisting of:

  a) bigger fruit size b) bigger vegetable size c) higher sugar concentration. . . higher crop firmness f) longer storability g) improved appearance h) better fruit finish i) earlier fruit maturation j) increase in plant height k) bigger leaf blade 1) less dead basal leaves m) greener leaf color n) earlier flowering o) increased shoot growth p) improved plant vigour q) early germination.
- CLM What is claimed is:
  7. A method according to claim 1, wherein the amide compound of formula
  (I) is applied to said plants or the locus in which they grow
  in the form of granules at an application rate of from about 0.005.
- CLM What is claimed is:

  9. A method according to claim 1, wherein the plants being selected from the group consisting of rice, corn, cereal and vegetable plants and turf.
- CLM What is claimed is: 10. A method according to claim 1, wherein a mixture of the amide compound of formula I with a strobilurin is used.
- CLM What is claimed is:

  11. A method according to claim 10, wherein the strobilurin is selected from the group consisting of azoxystrobin, dimoxystrobin, fluoxastrobin, kresoxim-methyl, metominostrobin, orysastrobin, picoxystrobin, pyraclostrobin or trifloxystrobin.
- CLM What is claimed is: 13. A method according to claim 10, wherein the ratio between the amide compound I and the strobilurin is from 20:1 to 1:20.
- CLM What is claimed is: 14. A method according to claim 10, wherein the amide compound and the strobilurin are applied simultaneously, that is either together or separately, or in succession.
- IT 117428-22-5D, Picoxystrobin, mixture with amides 126572-77-8D, Strobilurine, mixture with amides 131860-33-8D, Azoxystrobin, mixture with amides 133408-50-1D, Metominostrobin, mixture with amides 141517-21-7D, Trifloxystrobin, mixture with amides 14390-89-0D, Kresoxim-methyl, mixture with amides 149708-54-3 149961-52-4D, Dimoxystrobin, mixture with amides 175013-18-0D, Pyraclostrobin, mixture with amides 188425-85-6, Boscalid 203924-02-1, BAS 516 248593-16-0D, Orysastrobin, mixture with amides (plant growth stimulator)

ACCESSION NUMBER: 2004:315487 USPATFULL

Crystalline hydrates of nicotinic acid anilide and TITLE:

benzovl anilide derivatives

INVENTOR(S): Bratz, Matthias, Limburgerhof, GERMANY, FEDERAL

REPUBLIC OF

Wigger, August, Kemnath-Stadt, GERMANY, FEDERAL

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Erk, Peter, Frankenthal, GERMANY, FEDERAL REPUBLIC OF Ziegler, Hans, Mutterstadt, GERMANY, FEDERAL REPUBLIC

Krohl, Thomas, Mainz, GERMANY, FEDERAL REPUBLIC OF Jager, Karl-Friedrich, Limburgerhof, GERMANY, FEDERAL REPUBLIC OF

Mayer, Horst, Guaratingueta, BRAZIL

KIND DATE NUMBER PATENT INFORMATION: US 2004249164 A1 20041209 US 7087239 B2 20060808 APPLICATION INFO .: US 2004-490370 A1 20040323 (10) WO 2002-EP10320 20020914

> NUMBER DATE

PRIORITY INFORMATION: DE 2001-10147034 20010925 DOCUMENT TYPE: Utility

FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE:

KEIL & WEINKAUF, 1350 CONNECTICUT AVENUE, N.W., WASHINGTON, DC, 20036

NUMBER OF CLAIMS: 14

EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 6 Drawing Page(s)

LINE COUNT: 804

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention relates to crystalline hydrates substituted nicotinanilinde derivatives, to their preparation, and to their use for controlling phytopathogenic fungi or undesired attack by insects or mites and/or for regulating the growth of plants.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 188425-85-6P

(preparation as pesticide) RN 188425-85-6 USPATFULL

CN 3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-biphenyl]-2-yl)- (CA INDEX NAME)

. . . to their preparation, and to their use for controlling phytopathogenic fungi or undesired attack by insects or mites and/or for regulating the growth of plants.

SUMM . . . the abovementioned active ingredient hydrate and methods for

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controlling phytopathogenic fungi or undesired attack by insects or
mites and/or for regulating the growth of
plants via dilution of the abovementioned formulations.
. . . it is desired to formulate water-insoluble compounds for the
purpose of applying them in liquid form to the pests or plants
in question, there are essentially two possibilities:
[0067] Viscosity-regulating additives which are suitable for
the abovementioned formulation types are compounds which impart
pseudoplastic flow behavior to the formulation, i.e..
 . . of the present invention, the term agrochemical active
ingredient is understood as meaning not only fungicides, but also
insectides and growth regulators.
[0082] Strobilurins such as methyl E-methoxyimino-[α-(o-
tolyloxy)-o-tolyl]acetate, methyl E-2-{2-[6-(2-cyanophenoxy)pyrimidin-4-
yloxy]phenyl}-3-methoxyacrylate (azoxystrobin),
N-methyl-E-methoxyimino-[α-(2-phenoxyphenyl)]acetamide (
metominostrobin), N-methyl-E-methoxyimino-[α-(2,5-
dimethylphenoxy)-o-tolyl]acetamide, methyl. E-2-{2-[(2-
trifluoromethylpyridyl-6-) oxymethyl]phenyl}-3-methoxyacrylate, methyl
(E, E)-methoximino-{2-[1-(3-trifluoromethylphenyl)ethylideneaminooxymethy
1]phenvl}-acetate (trifloxystrobin), methvl N-(2-{[1-(4-chlorophenvl)-1H-
pvrazo1-3-v1]oxvmethv1}phenv1)-N-methoxvcarbamate.
[0091] The following list of compounds with growth-regulatory
activity identifies possible active ingredients, but not by way of
limitation:
. . . present invention furthermore relates to a method of
controlling phytopathogenic fungi or undesired attack by insects or
mites and/or for regulating the growth of
plants, which is based on suitably diluting an SC or SE
formulation according to the invention and applying the dilute product
to the respective pest or plant, it being possible for the SC
or SE formulation in each case to comprise a further agrochemical active
ingredient from.
. . . Diaporthe citri on citrus fruit; Sphaerotheca species on
cucumbers, cucurbits, strawberries and roses; Cercospora species on
peanuts, sugar beet, egg plant and date plums; Erysiphe
cichoracearum and Sphaerotheca fuliginea on cucurbits, Leveiillina
taurica on pimento; Mycosphaerella species on apples and Japanese.
Phytophthora infestans on potatoes and tomatoes, Erysiphe graminis
(powdery mildew) on cereals, Fusarium and Verticillium species on a
variety of plants, Glomerella cinqulata on tea;
Helminthosporium species on cereals, Mycosphaerella species on bananas
and peanuts, Plasmopara viticola on grapevines and grapefruits, . . .
[0108] Regulation of the growth of plants can be
effected by the growth regulators which have already
been mentioned further above or by using fertilizer.
 . . SC or SE formulation according to the invention and applying
the dilution to the respective pest or to the materials, plants
, soil and seeds to be protected from the respective pests, it being
possible for the respective SC or SE formulation. . .
. . . substances can be applied pre-emergence or post-emergence. If
the active ingredients in question are less well tolerated by specific
crop plants, application techniques can be used in which the
dilute SC or SE formulations are sprayed, with the aid of the.
the agrochemical active ingredients come into as little contact as
possible, if any, with the leaves of the sensitive crop plants
while reaching the bare soil surface (post-directed, lay-by).
 . . . 3.0, preferably from 0.01 to 1.0, kg/ha, depending on the
intended aim of the control measures, the season, the target
plants and the growth stage.
What is claimed is:
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. . aqueous suspoemulsion as claimed in claim 11 and applying the

SUMM

CT.M

solution to the pest in question or to the materials, plants, soil and seeds to be protected from the pest in question.

## CLM What is claimed is:

. . method for the control of phytopathogenic fungi and the simultaneous control of undesired attack by insects or mites and/or for regulating the growth of plants, which comprises diluting a suspension concentrate as claimed in claim 10 or a multiphase aqueous suspoemulsion as claimed in claim 11 and applying the dilute product to the pest in question or to the materials, plants, soil and seeds to be protected from the pest in question, it being possible for the suspension concentration or the. .

## IT 188425-85-6P

(preparation as pesticide)

L9 ANSWER 17 OF 22 USPATFULL on STN

ACCESSION NUMBER: 2004:268380 USPATFULL

TITLE: Anthranilamide arthropodicide treatment

INVENTOR(S): Berger, Richard A, Claymont, DE, UNITED STATES

Flexner, John Lindsey, Landenberg, PA, UNITED STATES

	NUMBER	KIND	DATE	
PATENT INFORMATION: APPLICATION INFO.:	US 2004209923 US 2004-485125 WO 2002-US30302	A1 A1	20041021 20040126 20020910	(10

NUMBER DATE

PRIORITY INFORMATION: US 2001-323941P 20010921 (60) DOCUMENT TYPE: Utility

FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: Linda A Birch, E I du Pont de Nemours and Company,

Legal-Patents, Wilmington, DE, 19898

NUMBER OF CLAIMS: 23
EXEMPLARY CLAIM: 1
LINE COUNT: 6453

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

This invention pertains to methods for protecting a propagule or a plant grown therefrom from invertebrate pests comprising contacting the propagule or the locus of the propagule with a biologically effective amount of a compound of Formula I: its N-oxide or an agriculturally suitable salt thereof wherein A and B and R.sup.1 through R.sup.8 are as defined in the disclosure. This invention also relates to propagules treated with a compound of Formula I and compositions comprising a Formula I compound for coating propagules. ##STRI##

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 188425-85-6, Nicobifen

(in pesticidal compns. for plant propagation material containing anthranilamides)

RN 188425-85-6 USPATFULL

CN 3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-biphenyl]-2-yl)- (CA INDEX NAME)

- AB This invention pertains to methods for protecting a propagule or a plant grown therefrom from invertebrate pests comprising contacting the propagule or the locus of the propagule with a biologically effective amount. . . .
- SUMM [0001] This invention relates to the control of phytophagous invertebrate pests such as arthropod pests by contacting plant propagules or the locus of the propagules with certain anthranilamides and to propagule—coating compositions comprising the anthranilamides.
- SUMM [0003] Plants are subject to injury by invertebrate pests at all stages of growth, beginning with seeds or other propagules such as bulbs, tubers, rhizomes, corms, and stem and leaf cuttings and ending with mature plants. Besides the cost of materials, the effort and time required for application of invertebrate pest control substances make repetition of treatments undesirable. Ideally a single treatment of a plant at the propagule stage would protect the plant from invertebrate pests during its entire life.
- SUMM [0004] A variety of techniques for treating propagules with plant protection substances are known. These include soaking propagules in arthropodicide-comprising solutions, coating propagules with films, pelleting materials and the like.
- SUMM [0005] Particularly needed are invertebrate pest control treatments that can protect the plant not only at its propagule stage but also later in its development. Achieving this objective requires compounds that are active. . pests and can effectively translocate from the locus of the propagule up through the growing stems, leaves and other aboveground plant parts. Furthermore the compounds need to have high activity against invertebrate pests to compensate for the dilution occasioned by the expanding plant mass. Also, the compounds cannot rapidly degrade and lose their biological potency in the environment of the plant's vascular tissues. The combination of these properties is rare. Treatments of propagules effective for protecting from phytophagous invertebrate pests not only the propagule but also the plant at later growth stages have now been discovered.
- SUMM [0024] This invention provides a method for protecting a propagule or a plant grown therefrom from an invertebrate pest. The method comprises contacting the propagule or the locus of the propagule with a.
- DETD [0028] As referred to in the present disclosure and claims, the term "propagule" means a seed or a regenerable plant part. The term "regenerable plant part" means a part of a plant part of the than a seed from which a whole plant may be grown or regenerated when the plant part is placed in horticultural or agricultural growing media such as moistened soil, peat moss, sand, vermiculite, perlite, rock wool, . . fiberglass, coconut husk fiber, tree fern fiber and the like, or even a completely liquid medium such as water. Regenerable plant parts commonly include rhizomes, tubers, bulbs and corms of such geophytic plant species as potato, sweet potato, yam, onion, dahlia, tulip, narcissus, etc. Regenerable plant parts include plant parts that are divided (e.g., cut) to preserve their ability to grow into a new

plant. Therefore regenerable plant parts include viable divisions of rhizomes, tubers, bulbs and corms which retain meristematic tissue, such as an eye. Regenerable plant parts can also include other plant parts such as cut or separated stems and leaves from which some species of plants can be grown using horticultural or agricultural growing media. As referred to in the present disclosure and claims, unless otherwise.

DETD . have been discovered to not only have excellent activity controlling phytophagous invertebrate pests, but also have favorable residual patterns and plant translocation to provide protection of a plant developing from a plant propagule such as a seed, bulb, rhizome, tuber, corm, or stem or leaf cutting. (In the context of this disclosure. or damage caused by the pest, related expressions are defined analogously.) This invention thus provides a method for protecting a plant propagule from phytophagous invertebrate pests by contacting the propagule or the locus of the propagule with a biologically effective amount. amount of the Formula I compound has also been discovered to protect not only the propagule itself but also new growth developing from the

DETD . . . gastropods and nematodes of economic importance as pests. The term "phytophagous invertebrate pest" refers to invertebrate pests causing injury to plants by feeding upon them, such as by eating foliage, stem, leaf, fruit or seed tissue or by sucking the vascular juices of plants. The term "arthropod" includes insects, mites, centipedes, millipedes, pill bugs and symphylans. The term "gastropod" includes snails, slugs and other. . earwig (Forficula auricularia L.), black earwig (Chelisoches morio Fabricius); adults and nymphs of the orders Hemiptera and Homoptera such as, plant bugs from the family Miridae, cicadas from the family Cicadidae, leafhoppers (e.g. Empoasca spp.) from the family Cicadidae, planthoppers from.

DETD . . . bug), Graptosthetus spp. (complex of seed bugs), Leptoglossus corculus Say (leaf-footed pine seed bug), Lygus lineolaris Palisot de Beauvois (tarnished plant bug), Nezara viridula L. (southern green stink bug), Oebalus pugnax Fabricius (rice stink bug), Oncopeltus fasciatus Dallas (large milkweed bug), .

DETD [0250] The method of this invention is applicable to virtually all plant species. Seeds that can be treated, include for example, wheat (Triticum aestivum L.), durum wheat (Triticum durum Desf.), barley (Hordeum. . Hook.) and tuberous begonia (Begonia tuberhybrido Voss.). Stem cuttings can be treated according to this invention include those from such plants as sugarcane (Saccharum officinarum L.), carnation (Dianthus caryophyllus L.), florists chrysanthemum (Chrysanthemum mortifolium Ramat.), begonia (Begonia spp.), geranium (Geranium spp.),

DETD . . . 1964, list surfactants and recommended uses. All formulations can contain minor amounts of additives to reduce foam, caking, corrosion, microbiological growth and the like, or thickeners to increase viscosity.

DETD [0259] A propagule or a plant grown therefrom can be protected from an invertebrate pest according to this invention by a method comprising contacting the propagule. . . an effective amount of at least one other biologically active compound or agent. The compositions used for treating propagules (or plant grown therefrom) according to this invention can also comprise (besides the Formula I component) an effective amount of one or more other biologically active compounds or agents. Suitable additional compounds or agents include insecticides, fungicides, nematocides, bactericides, accricides, growth regulators such as rooting stimulants, chemosterilants, semiochemicals, repellents, attractants, pheromones, feeding stimulants, other biologically active compounds or

entomopathogenic bacteria, virus or. . . (BSN 2060), sulprofos, tebufenozide, teflubenzuron, tefluthrin, terbufos, tetrachlorvinphos, thiacloprid, thiamethoxam, thiodicarb, thiosultap-sodium, tralomethrin, trichlorfon and triflumuron; fungicides such as acibenzolar, azoxystrobin, benomyl, blasticidin-S, Bordeaux mixture (tribasic copper sulfate), bromuconazole, carpropamid, captafol, captan, carbendazim, chloroneb, chlorothalonil, copper oxychloride, copper salts, cyflufenamid, cymoxanil, cyproconazole, cyprodinil, (S)-3,5-dichloro-N-(3-chloro-1-ethyl-1-methyl-2-oxopropyl)-4methylbenzamide (RH 7281), diclocymet (S-2900), diclomezine, dicloran, difenoconazole, (S)-3,5-dihydro-5-methyl-2-(methylthio)-5-phenyl-3-(phenylamino)-4H-imidazol-4-one (RP 407213), dimethomorph, dimoxystrobin, diniconazole, diniconazole-M, dodine, edifenphos, epoxiconazole, famoxadone, fenamidone, fenarimol, fenbuconazole, fencaramid (SZX0722), fenpiclonil, fenpropidin, fenpropimorph, fentin acetate, fentin hydroxide, fluazinam, fludioxonil, flumetover (RPA 403397), flumorflflumorlin (SYP-L190), fluoxastrobin (HEC 5725), fluquinconazole, flusilazole, flutolanil, flutriafol, folpet, fosetyl-aluminum, furalaxyl, furametapyr (S-82658), hexaconazole, ipconazole, iprobenfos, iprodione, isoprothiolane, kasugamycin, kresoxim-methyl, mancozeb, maneb, mefenoxam, mepronil, metalaxyl metconazole, metominostrobin/fenominostrobin (SSF-126), metrafenone (AC 375839), mvclobutanil, neo-asozin (fenic methanearsonate), nicobifen (BAS 510), orysastrobin, oxadixyl, penconazole, pencycuron, probenazole, prochloraz, propamocarb, propiconazole, proquinazid.

DETD [0261] Preferred plant growth regulants for mixing with the Formula I compounds in compositions for treating stem cuttings are 1H-indole-3-acetic acid, 1H-indole-3-butanoic acid and.

DETD . . . (i.e. biologically effective amount) will vary with the type of propagule, the Formula I compound, the duration and extent of plant protection desired, the invertebrate pests to be controlled and environmental factors. The concentration of Formula I compound in the drench.

DEID . (i.e. biologically effective amount) will vary with the type of propagule, the Formula I compound, the duration and extent of plant protection desired, the invertebrate pests to be controlled and environmental factors. The concentration of Formula I compound in the growing.

DETD . least 3 mm) is more effective than treatment of small seeds for providing invertebrate pest control protection to the developing plant. Treatment of propagules such as tubers, bulbs, corms, rhizomes and stem and leaf cuttings also can provide effective treatment of the developing plant in addition to the propagule. The formulations useful for growing-medium drenches are generally also useful for soaking treatments. The soaking. . . (i.e. biologically effective amount) will vary with the type of propagule, the Formula I compound, the duration and extent of plant protection desired, the invertebrate pests to be controlled and environmental factors. The concentration of Formula I compound in the soaking.

concentration of Formula I compound in the Soaking.

. adhesive agent) at least one additional biologically active compound or agent selected from fingicides of the group consisting of acibenzolar, acoxystrobin, benomyl, blasticidin-S, Bordeaux mixture (tribasic copper sulfate), bromuconazole, carpropamid, captafol, captan, carbendazin, chloroneb, chlorothalonil, copper oxychloride, copper salts, cyflufenamid, cymoxanil, cyproconazole, cyprodinil, (S)-3,5-dichloro-N-(3-chloro-l-ethyl-1-methyl-2-oxopropyl)-4-methylbenzamide (RH 7281), diclocymet (S-2900), diclomezine, dicloran, difenoconazole, (S)-3,5-dihydro-5-methyl-2-(methylthio)-5-phenyl-3-(phenylamino)-4H-imidazol-4-one (RP 407213), dimethomorph, dimoxystrobin, diniconazole, diniconazole-M, dodine, edifenphos, epoxiconazole, famoxadone, fenamidone, fenamido

fencaramid (SZX0722), fenpiclonil, fenpropidin, fenpropimorph, fentin acetate, fentin hydroxide, fluazinam, fludioxonil, flumetover (RPA 403397), flumorflflumorlin (SYP-L190), fluoxastrobin (HEC 5725), fluquinconazole, flusilazole, flutolanil, flutriafol, folpet, fosetyl-aluminum, furalaxyl, furametapyr (S-82658), hexaconazole, ipconazole, iprobenfos, iprodione, isoprothiolane, kasugamycin, kresoxim-methyl, mancozeb, maneb, mefenoxam, mepronil, metalaxyl, metconazole, metominostrobin/fenominostrobin (SSF-126), metrafenone (AC 375839), myclobutanil, neo-asozin (ferric methanearsonate), nicobifen (BAS 510), orvsastrobin, oxadixyl, penconazole, pencycuron, probenazole, prochloraz, propamocarb, propiconazole, proquinazid. .

. . . (i.e. biologically effective amount) will vary with the type of propagule, the Formula I compound, the duration and extent of plant protection desired, the invertebrate pests to be controlled and environmental factors. The coating needs to not inhibit germination or sprouting of the propagule and should be consistently efficacious in reducing plant injury during the plant -injury-causing phase of the target invertebrate pest's life cycle. A coating comprising sufficient Formula I compound can provide invertebrate pest control.

DETD

DETD

DETD . Tests in the Biological Examples of the Invention demonstrate the efficacy of methods and compositions of the invention for protecting plants from specific arthropod pests. The pest control protection afforded by the compounds is not limited, however, to these species. See. . . . . in Example E and untreated seeds for comparison were planted in

pots using sterile Sassafras soil and grown in a growth chamber with 16 hours of light at 28° C. and 8 hours of darkness at 24° C. and 50% relative humidity. After 31 days two plants, each having true leaves, were selected from each of the seed batches and their cotyledons were removed. Adult Bemisia argentifolii (silverleaf whitefly) were added for egg-laying on the plants, and plastic cylinders capped with tissue paper were fitted into the pots. Three days later, the adults were removed and. to verify egg deposits. Fifteen days later (about six days after egg hatching), the infested leaves were removed from the plants and the 49-day results determined by counting the dead and live nymphs on the undersides of the leaves. Adult Bemisia argentifolii were reintroduced for a second round of egg-laying on upper leaves of the plants, and plastic cylinders with tissue paper were fitted into the pots as before. Three days later, the adults were removed. . . checked to verify egg deposits. Fourteen days later (about six days after egg hatching), the leaves were removed from the plants and the 66-day results determined by counting the dead and live nymphs on the undersides of the leaves. The results. . .

[0305] This test demonstrates that seed coatings according to this DETD invention can protect cotton plants from the homopteran pest Bemisia argentifolii for more than 9 weeks after seeding. DETD

. . . Example E and untreated seeds for comparison were planted in 10-cm pots using sterile sassafras soil and grown in a growth chamber with 16 hours of light and 8 hours of darkness at 25° C. and 50% relative humidity. Leaves were harvested from some of the plants 14 days after seeding, cut into 3 to 4 pieces, and placed one piece per well in covered 16-well translucent plastic trays in the growth chamber. Second-instar larvae of Heliothis virescens (tobacco budworm) were added to the leaf pieces (1 larva/well, 6-10 larvae per treatment/leaf. . . and the insect mortality was determined 48 hours and 96 hours after infestation. Leaves were harvested from other of the plants 64 days after seeding, cut into 3 to 4 pieces, and placed one piece per well in covered 16-well translucent plastic trays in the growth chamber. Second-instar

larvae of Heliothis virescens (tobacco budworm) were added to the leaf pieces (1 larva/well, 6-16 larvae per treatment/leaf. . .

81 DETD . . . 6 Bottom 31 concentration 75 Nominal 3% Top 100 concentration 50 100 Bottom 12 Untreated Top 12 Check Bottom 19 19

\*Location on cotton plant from which leaf was removed.

DBID [0308] This test demonstrates that seed coatings according to this invention can protect cotton plants from the lepidopteran pest Heliothis virescens for more than 9 weeks after seeding.

DBID . . in Example G and untreated seeds for comparison were plan

. . in Example G and untreated seeds for comparison were planted in pots using either sterile Sassafras soil or Drummer soil. Plants were grown in the greenhouse and sampled when they started to produce buds (squares). The leaves from the second node and the terminal leaves greater than 15 cm.sup.2 were sampled (plants had

approximately 5 leaves). The clipped leaf from each plant was cut into 4 pieces and each piece was placed into a well with one second-instar larvae of Heliothis virescens. . . on Leaves with

Seed Treatments Grown in Two Soil Types

		96-hour % Larval	Mortality
Compound	Soil Type	Terminal Leaf	Base of Plant
208	Sassafras	35.0	47.5
	Drummer	58.3	79.2
276	Sassafras	81.3	81.3
	Drummer	85.7	96.4
486	Sassafras	43.8	34.4
	Drummer	57.1	67.9
502	Sassafras	25.0	
DETD	compounds 208,	484, 486, 502, 50	9 and 515 as pr

. . . compounds 208, 484, 486, 502, 509 and 515 as prepared in Example F were planted in pots with Sassafras soil. Plants were grown to whorl height (9th leaf) in the greenhouse and infested with 25 fall armyworm (first-instar larvae) down the whorl. Six days after infesting the plant damage associated with the feeding was recorded. Plant damage was rated on a of 0 -100% (0 means no feeding).

TABLE D

Percent Plant Damage from Larval Feeding on Corn Plants with Different Seed Treatments

56

Compound Percent Plant Damage

208 8
484 29
486 23
509 10
502 10
515 7

Untreated

DETD . . . (Nominal 1.75%, 1.09%, 0.58%, 0.29% and 0.15%) were planted in agricultural fileds near Newark, Del. and Donna Tex. When the plants had produced a 5th leaf at least 10 cm long it was cut. One clipped leaf from at least 16 plants for each rate was taken and placed into a well with one second-instar fall armyworm larvae. Larval mortality was recorded. . .

DETD [0312] Corn plants at the Donna site were measured to determine plant growth. Leaves were folded up into a tube, and the height from the ground to the furthest leaf tip in the. .

DETD [0313] TABLE E2

Plant Height of Corn with Compound 502 Seed

Treatments at Donna, TX

Seed Treatment (Nominal rate)

Untreated 0.15% 0.29% 0.58% 1.09% 1.75%

Height.

DETD [0314] As can be seen from Table E2, treatment with Compound 502 appears to have promoted plant growth in this test.

to have promoted place.
CLM What is claimed is:

1. A method for protecting from a propagule or a plant grown therefrom from an invertebrate pest, comprising: contacting the propagule or the locus of the propagule with a biologically effective.

CLM What is claimed is:

- . wherein at least one additional biologically active compound or agent is selected from fungicides of the group consisting of acibenzolar, azoxystrobin, benomyl, blasticidin-S, Bordeaux mixture (tribasic copper sulfate), bromuconazole, carpropamid, captafol, captan, carbendazim, chloroneb, chlorothalonil, copper oxychloride, copper salts, cyflufenamid, cymoxanil, cyproconazole, cyprodinil, (S)-3,5-dichloro-N-(3-chloro-1-ethyl-1-methyl-2-oxopropyl)-4methylbenzamide (RH 7281), diclocymet (S-2900), diclomezine, dicloran, difenoconazole, (S)-3,5-dihydro-5-methyl-2-(methylthio)-5-phenyl-3-(phenylamino)-4H-imidazol-4-one (RP 407213), dimethomorph, dimoxystrobin, diniconazole, diniconazole-M, dodine, edifenphos, epoxiconazole, famoxadone, fenamidone, fenarimol, fenbuconazole, fencaramid (SZX0722), fenpiclonil, fenpropidin, fenpropimorph, fentin acetate, fentin hydroxide, fluazinam, fludioxonil, flumetover (RPA 403397), flumorf/flumorlin (SYP-L190), fluoxastrobin (HEC 5725), fluquinconazole, flusilazole, flutolanil, flutriafol, folpet, fosetyl-aluminum, furalaxyl, furametapyr (S-82658), hexaconazole, ipconazole, iprobenfos, iprodione, isoprothiolane, kasugamycin, kresoxim-methyl, mancozeb, maneb, mefenoxam, mepronil, metalaxyl, metconazole, metominostrobin/fenominostrobin (SSF-126), metrafenone (AC 375839), myclobutanil, neo-asozin (ferric methanearsonate), nicobifen (BAS 510), orvsastrobin, oxadixvl, penconazole, pencycuron, probenazole, prochloraz, propamocarb, propiconazole, proquinazid. . .
- ΙT 52-68-6 56-38-2 57-13-6D, Urea, derivs. 60-51-5, Dimethoate 72-43-5 76-87-9, Fentin hydroxide 83-79-4 86-50-0, Azinphos-methyl 99-30-9, Dicloran 108-62-3 115-29-7 115-32-2 116-06-3 121-75-5 133-06-2, Captan 133-07-3, Folpet 137-26-8, Thiram 148-79-8, Thiabendazole 298-00-0 298-02-2 333-41-5, Diazinon 510-15-6 900-95-8, Fentin acetate 944-22-9 950-37-8 1332-40-7. 732-11-6 Copper oxychloride 1563-66-2, Carbofuran 1897-45-6, Chlorothalonil 2079-00-7, Blasticidin-S 2227-17-0 2310-17-0 2312-35-8 Captafol 2439-01-2 2439-10-3, Dodine 2675-77-6, Chloroneb 2921-88-2, Chlorpyrifos 5598-13-0, Chlorpyrifos-methyl 6585-53-1, Ferric methanearsonate 6923-22-4 6980-18-3, Kasugamycin 7440-50-8D, Copper, salts 7704-34-9, Sulfur, biological studies 8011-63-0, Bordeaux mixture 8018-01-7, Mancozeb 10265-92-6 10605-21-7, Carbendazim 11141-17-6, Azadirachtin 12427-38-2, Maneb 13071-79-9 23135-22-0 23564-05-8, Thiophanate-methyl 24579-73-5, Propamocarb 25311-71-1 26087-47-8, Iprobenfos 27605-76-1, Probenazole 30560-19-1, Acephate 33089-61-1 35367-38-5, Diflubenzuron

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35400-43-2 36734-19-7, Iprodione 39148-24-8, Fosetylaluminum 39515-41-8 40596-69-8 41198-08-7 41814-78-2, Tricyclazole 43121-43-3, Triadimefon 50471-44-8, Vinclozolin 50512-35-1,
Isoprothiolane 50642-14-3, Validamycin 51630-58-1 52207-48-4
52315-07-8, Cypermethrin 52645-53-1 52918-63-5, Deltamethrin
53112-28-0, Pyrimethanil 55219-65-3, Triadimenol 55814-41-0, Mepronil
57369-32-1, Pyroquilon 57646-30-7, Furalaxyl 57837-19-1, Metalaxyl
57966-95-7, Cymoxanil 58842-20-9 59669-26-0 60168-88-9, Fenarimol
60207-90-1, Propiconazole 62850-32-2 62865-36-5, Diclomezine
63837-33-2, Diofenolan 64628-44-0 66063-05-6, Pencycuron
66215-27-8, Cyromazine 66230-04-4 66246-88-6, Penconazole
66332-96-5, Flutolanil 66841-25-6 67306-00-7, Fenpropidin
67564-91-4, Fenpropimorph 67747-09-5, Prochloraz 68085-85-8,
Cyhalothrin 68359-37-5, Cyfluthrin 69327-76-0, Buprofezin
70124-77-5 70630-17-0, Mefenoxam 71422-67-8, Chlorfluazuron
71751-41-2, Abamectin 72490-01-8 73989-17-0, Avermectin 74738-17-3,
Fenpiclonil 76674-21-0, Flutriafol 77732-09-3, Oxadixyl 78587-05-0
79538-32-2 79622-59-6, Fluazinam 79983-71-4, Hexaconazole
80060-09-9, Diafenthiuron 82657-04-3, Bifenthrin 83121-18-0
83657-18-5, Diniconazole-M 83657-24-3, Diniconazole 84466-05-7,
Amidoflumet 85509-19-9, Flusilazole 86479-06-3 88283-41-4, Pyrifenox 88671-89-0, Myclobutanil 91465-08-6 94361-06-5,
Cvproconazole 95737-68-1 96489-71-3 101463-69-8 102851-06-9
103055-07-8 104030-54-8, Carpropamid 107534-96-3, Tebuconazole 110488-70-5, Dimethomorph 111988-49-9 112226-61-6 112281-77-3,
Tetraconazole 112410-23-8 114369-43-6, Fenbuconazole 116255-48-2, Bromuconazole 116714-46-6 118134-30-8, Spiroxamine 119168-77-3
119446-68-3, Difenoconazole 119791-41-2, Emamectin 120068-37-3
120928-09-8 121451-02-3 121552-61-2, Cyprodinil 122453-73-0, Chlorfenapyr 123312-89-0 123572-88-3, Furametpyr 124495-18-7,
Quinoxyfen 125116-23-6, Metconazole 125225-28-7, Ipconazole
126448-41-7, Acibenzolar 130000-40-7, Thifluzamide 131341-86-1,
Fludioxonil 131807-57-3, Famoxadone 131860-33-8, Azoxystrobin
131983-72-7, Triticonazole 133408-50-1, Metominostrobin 133855-98-8,
Epoxiconazole 134098-61-6 135410-20-7, Acetamiprid 136426-54-5,
Fluquinconazole 138261-41-3 139920-32-4, Diclocymet 140923-17-7,
SZX0722 141517-21-7, Trifloxystrobin 143390-89-0, Kresoxim-methyl
143807-66-3, Chromafenozide 149877-41-8, Bifenazate 149961-52-4,
Dimoxystrobin
               153233-91-1 153719-23-4 154025-04-4, Flumetover
156052-68-5, RH 7281 158062-67-0 161050-58-4 161326-34-7
168316-95-8, Spinosad 170015-32-4 173584-44-6 175013-18-0,
Pyraclostrobin 178928-70-6, Prothioconazole 179101-81-6
180409-60-3, Cyflufenamid 181587-01-9 188425-85-6, Nicobifen
189278-12-4, Proquinazid 210880-92-5, Clothianidin 211867-47-9,
SYP-L190
          220899-03-6, Metrafenone 223580-51-6, Tiadinil
248593-16-0, Orysastrobin 283594-90-1 361377-29-9, Fluoxastrobin
  (in pesticidal compns. for plant propagation material containing
  anthranilamides)
```

L9 ANSWER 18 OF 22 USPATFULL on STN ACCESSION NUMBER: TITLE:

INVENTOR(S):

2002:152666 USPATFULL

Fungicidal mixtures based on amide compounds and tetrachloroisophthalonitrile Schelberger, Klaus, Gonnheim, GERMANY, FEDERAL REPUBLIC

Scherer, Maria, Landau, GERMANY, FEDERAL REPUBLIC OF Eicken, Karl, Wachenheim, GERMANY, FEDERAL REPUBLIC OF Hampel, Manfred, Neustadt, GERMANY, FEDERAL REPUBLIC OF Ammermann, Eberhard, Heppenheim, GERMANY, FEDERAL REPUBLIC OF

Lorenz, Gisela, Neustadt, GERMANY, FEDERAL REPUBLIC OF Strathmann, Siegfried, Limburgerhof, GERMANY, FEDERAL

REPUBLIC OF

PATENT ASSIGNEE(S): BASF Aktiengesellschaft, Ludwigshafen, GERMANY, FEDERAL REPUBLIC OF (non-U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 6410572	B1	20020625	
	WO 9931983		19990701	
APPLICATION INFO.:	US 2000-581795		20000619	(9)
	WO 1998-EP8226		19981215	
			20000619	PCT 371 date

DOCUMENT TYPE: Utility

FILE SEGMENT: GRANTED

PRIMARY EXAMINER: Robinson, Allen J. LEGAL REPRESENTATIVE: Keil & Weinkauf

NUMBER OF CLAIMS: 17

EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 0 Drawing Figure(s); 0 Drawing Page(s)

LINE COUNT: 658

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Fungicidal mixtures comprise as active components

a) an amide compound of the formula I

in which

A is an aryl group or an aromatic or non-aromatic, 5- or 6-membered heterocycle which has from 1 to 3 hetero atoms which are selected from 0, N and S;

where the aryl group or the heterocycle may or may not have 1, 2 or 3 substituents which are selected, independently of one another, from alkyl, halogen, CHF.sub.2, CF.sub.3, alkoxy, haloalkoxy, alkylthio, alkylsulfinyl and alkylsulfonyl;

R.sup.1 is a hydrogen atom;

R.sup.2 is a phenyl or cycloalkyl group which may or may not have 1, 2 or 3 substituents which are selected, independently of one another, from alkyl, alkenyl, alkenyl, alkoxy, alkenyloxy, alkynyloxy, cycloalkyl, cycloalkyloxy, cycloalkenyloxy, penyl and halogen, where the aliphatic and cycloaliphatic radicals may be partially or fully halogenated and/or the cycloaliphatic radicals may be substituted by from 1 to 3 alkyl groups and where the phenyl group may have from 1 to 5 halogen atoms and/or from 1 to 3 substituents which are selected, independently of one another, from alkyl, haloalkyl, alkoxy, haloalkoxy, alkylthio and haloalkylthio, and where the amidic phenyl group may or may not be substituted by one or more alkyl groups and/or may have a hetero atom selected from 0 and S, and

b) tetrachloroisophthalonitrile II ##STR1##

in a synergistically effective amount.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 228101-74-4

(synergistic fungicide)

RN 228101-74-4 USPATFULL

CN 3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-bipheny1]-2-y1)-, mixt.

with 2,4,5,6-tetrachloro-1,3-benzenedicarbonitrile (9CI) (CA INDEX NAME)

CM 1

CRN 188425-85-6 CMF C18 H12 C12 N2 O

CM

CRN 1897-45-6 CMF C8 C14 N2

SUMM Mixtures of representatives of the class of the strobilurins and chlorothalonil are known from EP-A 741 970.

SUMM . . . which further active ingredients against harmful fungi or other pests, such as insects, arachids or nematodes, or else herbicidal or growth-regulating active ingredients or fertilizers can be admixed.

SUMM They are especially important for controlling a large number of fungi in a variety of crop plants, such as cotton, vegetable species (e.g. cucumbers, beans, tomatoes, potatoes and cucurbits), barley, grass, oats, bananas, coffee, malze, fruit species, . . .

SUMM . . . II or of the mixtures of the compounds I and II is effected by spraying or dusting the seeds, the plants or the soils before or after sowing of the plants, or before or after

plant emergence.

SUMM

. . I or II, the mixtures, or the corresponding formulations, are applied by treating the harmful fungi, their habitat, or the plants, seeds, soils, areas, materials or spaces to be kept free

from them with a fungicidally effective amount of the mixture,. . . DETD  $\alpha$  corresponds to the fungal infection of the treated

plants in % and DETD  $\beta$  corresponds to the fungal infection of the untreated (control)

plants in %
An efficacy of 0 means that the infection level of the treated plants corresponds to that of the untreated control plants; an efficacy of 100 means that the treated plants

were not infected.

```
DETD
     Leaves of potted plants of the variety "Groβe
       Fleischtomate" were sprayed to runoff point with an aqueous suspension
       which had been prepared from a. . . and 27% of emulsifier. The next
       day, the leaves were infected with an aqueous zoospore suspension of
       Phytophthora infestans. The plants were subsequently placed in
       a water-vapor-saturated chamber at 16-18° C. After 6 days, the
       tomato blight on the untreated but infected control plants had
       developed to such an extent that the infection could be determined
       visually in %. The test results are shown. .
CLM
       What is claimed is:
       11. A method for controlling harmful fungi, which comprises treating the
       fungi, their habitat, or materials, plants, seeds, soils,
       areas or spaces to be protected against fungal attack with an effective
       amount of the composition defined in.
ΤТ
      228101-70-0 228101-74-4 228101-80-2
        (synergistic fungicide)
   ANSWER 19 OF 22 USPATFULL on STN
ACCESSION NUMBER:
                        2001:112356 USPATFULL
TITLE:
                        Process and agents for controlling harmful fungi
INVENTOR(S):
                        Wagner, Oliver, Ludwigshafen, Germany, Federal Republic
                        Eicken, Karl, Wachenheim, Germany, Federal Republic of
                        Ammermann, Eberhard, Heppenheim, Germany, Federal
                        Republic of
                        Lorenz, Gisela, Hambach, Germany, Federal Republic of
                        Strathmann, Siegfried, Limburgerhof, Germany, Federal
                        Republic of
                        Kohle, Harald, Bobenheim, Germany, Federal Republic of
                        Retzlaff, Gunter, Romerberg, Germany, Federal Republic
PATENT ASSIGNEE(S):
                        BASF Aktiengesellschaft, Ludwigshafen, Germany, Federal
                        Republic of (non-U.S. corporation)
                            NUMBER
                                         KIND
                                                 DATE
```

		II OTTEDET				
PATENT INFORMATION:	US	6262091	B1	20010717		
	WO	9739628		19971030		
APPLICATION INFO.:	US	1998-171523		19981021	(9)	
	WO	1997-EP2036		19970422		
				19981021	PCT	371 date
				19981021	PCT	102(e) date

NUMBER DATE

DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Pak, John
LEGAL REPRESENTATIVE: Keil & Weinkauf

NUMBER OF CLAIMS: 19 EXEMPLARY CLAIM: 1

PRIORITY INFORMATION:

LINE COUNT: 943
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Compositions for controlling harmful fungi, containing in a solid or liquid carrier

DE 1996-19615977 19960422

- a) at least one p-hydroxyaniline derivative of the formula I ##STR1##
- b) at least one amide compound of the formula II

A--CO--NR.sup.8 --R.sup.9 (II)

where the substituents have the meanings indicated in the description;

and methods of controlling harmful fungi using compositions of this type are described.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

- IT 188425-85-6D, mixts. with p-hydroxyaniline derivs.
  - (synergistic fungicidal mixts.)
- RN 188425-85-6 USPATFULL
- CN 3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-biphenyl]-2-yl)- (CA INDEX NAME)

- SUMM . . . compounds are used alone, however, it has been shown that their action is only temporary, i.e. after some time renewed growth of the fundi could be observed.
- SUMM . . . invention also relates to a method of controlling harmful fungi, which comprises treating the fungi, their habitat or the materials, plants, seeds, soils, surfaces or spaces to be protected from fungal attack with a composition as defined above, it being possible . . .
- SUMM Normally, the plants are sprayed or dusted with the active compounds or the seeds of the plants are treated with the active compounds.
- SUMM . . . fundi, in particular against Botrytis. In some cases they are systemically active (i.e. they can be absorbed by the treated plants without loss of action and, if appropriate, transported in the plants) and can be employed as foliar and soil fundicides.
- SUMM They are of particular importance for the control of a multiplicity of fungi on various crop plants such as wheat, rye, barley, vines, rice, corn, grass, cotton, soybeans, coffee, sugar cane, votes, fruits and decorative plants and vegetable plants such as cucumbers, beans and cucurbits, and on the seeds of these plants.
- The compositions are applied by treating the fungi or the seeds, plants, materials or the soil to be protected from fungal attack with a fungicidally active amount of the active compounds.
- SUMM Application is carried out before or after the infection of the materials, plants or seeds by the fungi.
- SUMM The compositions are especially suitable for controlling the following plant diseases:
- SUMM Fusarium and Verticillium species on various plants.
- SUMM . . . the application form as fungicides, the compositions according to the invention can also contain other active compounds, e.g. herbicides, insecticides, growth regulators, fungicides or alternatively fertilizers.
- SUMM strobilurins such as methyl E-methoximino-[α-(o-tolyloxy)-o-tolyl]acetate, methyl E-2-(2-[6-(2-cyanophenoxy)pyrimidin-4-yl-oxy]phenyl)-3-methoxyacrylate, methyl E-methoximino-[α-(2,5-dimethyloxy)-o-tolyl]acetamide,

DETD . . . 80% of active compound and 20% of emulsifier in the dry matter. After the spray coating had dried on, the plants were sprayed with a conidia suspension of the fungus Botrytis cinerea and placed in a chamber with high atmospheric humidity at 22 to 24°C. After 5 days, the disease had developed on the untreated control plants so severely that the resulting leaf necrosis covered the greater part of the leaves (attack 100%).

CLM What is claimed is:

11. A method of controlling harmful fungi, which comprises treating the fungi, their habitat or the materials, plants, seeds, soils, surfaces or spaces to be protected from fungal attack with the composition defined in claim 1, wherein components.

IT 149708-54-3D, mixts. with p-hydroxyaniline derivs. 188425-85-6D, mixts. with p-hydroxyaniline derivs.

(synergistic fungicidal mixts.)

L9 ANSWER 20 OF 22 USPATFULL on STN

ACCESSION NUMBER: 2001:1743 USPATFULL

TITLE: Harmful fungi control with an active substance

inhibiting respiration by inhibiting the cytochrome complex III, combined with an amide

INVENTOR(S): Bayer, Herbert, Mannheim, Germany, Federal Republic of

Sauter, Hubert, Mannheim, Germany, Federal Republic of
Kohle, Harald, Bobenheim, Germany, Federal Republic of
Retzlaff, Gunter, Romerberg, Germany, Federal Republic

Ammermann, Eberhard, Heppenheim, Germany, Federal

Republic of

Lorenz, Gisela, Hambach, Germany, Federal Republic of Strathmann, Siegfried, Limburgerhof, Germany, Federal

Republic of

Eicken, Karl, Wachenheim, Germany, Federal Republic of BASF Aktiengesellschaft, Ludwigshafen, Germany, Federal

Republic of (non-U.S. corporation)

NUMBER DATE

PRIORITY INFORMATION: DE 1995-19535366 19950922

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Dees, Jose' G.
ASSISTANT EXAMINER: Pryor, Alton

ASSISTANT EXAMINER: Pryor, Alton LEGAL REPRESENTATIVE: Keil & Weinkauf NUMBER OF CLAIMS: 11

EXEMPLARY CLAIM: 1 LINE COUNT: 1242

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Compositions for controlling harmful fungi which comprise, as active ingredients, at least one compound which inhibits respiration on the cytochrome complex III and at least one amide compound of the formula II

where A, R.sup.1 and R.sup.2 have the meanings given in the description. The compositions according to the invention can be used, in particular, for controlling botrytis.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 189001-19-2 189001-21-6 189001-23-8

189001-25-0 189001-27-2

(synergistic agrochem. fungicide)

RN 189001-19-2 USPATFULL

CN 3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-biphenyl]-2-yl)-, mixt. with  $2-[[[1-(4-chlorophenyl)ethylidene]amino]oxy]methyl]-<math>\alpha$ -(methoxyimino)-N-methylbenzeneacetamide (9CI) (CA INDEX NAME)

CM 1

CRN 188425-85-6 CMF C18 H12 C12 N2 O

CM :

CRN 139751-54-5 CMF C19 H20 C1 N3 O3

RN 189001-21-6 USPATFULL

CN 3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-biphenyl]-2-yl)-, mixt. with \( \alpha \)-(methoxyimino)-N-methyl-2-(4-methyl-5-phenyl-2,7-dioxa-3,6-diazaocta-3,5-dien-1-yl)benzeneacetamide (9CI) (CA INDEX NAME)

CM 1

CRN 188425-85-6

CMF C18 H12 C12 N2 O

CM 2

CRN 172719-88-9 CMF C21 H24 N4 O4

RN 189001-23-8 USPATFULL CN Benzeneacetic acid, α-(

Benzeneacetic acid,  $\alpha$ -(methoxyimino)-2-[(2-methylphenoxy)methyl]-, methyl ester, mixt. with 2-chloro-N-(4'-chloro[1,1'-biphenyl]-2-yl)-3-pyridinecarboxamide (9C1) (CA INDEX NAME)

CM 1

CRN 188425-85-6 CMF C18 H12 C12 N2 O

CM 2

CRN 144167-04-4 CMF C18 H19 N O4

RN 189001-25-0 USPATFULL

CN 3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-bipheny1]-2-y1)-, mixt. with 2-[(2,5-dimethylphenoxy)methyl]-α-(methoxyimino)-N-methylbenzeneacetamide (9CI) (CA INDEX NAME)

CM 1

CRN 188425-85-6 CMF C18 H12 C12 N2 O

CM :

CRN 145451-07-6 CMF C19 H22 N2 O3

RN 189001-27-2 USPATFULL

CN 3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-biphenyl]-2-yl)-, mixt. with 2-[5-(4-fluorophenyl)-4-methyl-2,7-dioxa-3,6-diazaocta-3,5-dien-1-yl]-a-(methoxyimino)-N-methylbenzeneacetamide (9CI) (CA INDEX NAME)

CM 1

CRN 188425-85-6

CMF C18 H12 C12 N2 O

CM 2

CRN 172524-76-4 CMF C21 H23 F N4 O4

- IT 188425-85-6D, mixts. with cytochrome complex III inhibitors (synergistic agrochem. fungicides)
- RN 188425-85-6 USPATFULL
- CN 3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-bipheny1]-2-y1)- (CA INDEX NAME)

- SUMM . . . Brandt, U. Haase, H. Schagger, G. von Jagow: "Spezifitat and Wirkmechanismus der Strobilurine" [Specificity and mechanism of action of the strobilurins], Dechema monograph Vol. 129, 27-38, VCH Verlagsgesellschaft Weinheim, 1993; J. M. Clough: Natural Product Reports, 1993, 565-574; F. Rohl, H. . .
- SUMM However, when using these active ingredients, it has emerged that their action is only transitory, ie. new fungal growth was observed after only a short time.
- SUMM . . . invention also relates to a method of controlling harmful fungi, which comprises treating the fungi, their environment, or the materials, plants, seeds, soils, areas or spaces to be protected against fungal infection, with a composition as defined above, it being possible. . .
- SUMM Normally, the plants are sprayed or dusted with the active ingredients, or the seeds of the plants are treated with the active ingredients.
- SUMM ... phytopathogenic fungi, in particular against botrytis. some of them act systemically (ie. they can be taken up by the treated plants without losing their activity and, if appropriate,

translocated within the plant) and can be employed as foliarand soil-acting fungicides.

SUMM They are particularly important for controlling a large number of fungi in a variety of crop plants such as wheat, rye, barley, oats, rice, maize, grass, cotton, soybeans, coffee, sugar cane, grapevine, fruit species, ornamentals and vegetable species such as cucumbers, beans and cucurbits, and on the seeds of these plants.

SUMM The compositions are applied by treating the fungi, or the seeds, plants, materials or the soil to be protected against fungal infection, with a funcicidally active amount of the active incredients.

SUMM Application is effected before or after infection of the materials, plants or seeds with the fungi.

SUMM Specifically, the compositions are suitable for controlling the

following plant diseases: SUMM Fusarium and Verticillium species in a variety of plants,

Alternaria species in vegetables and fruit,

SUMM . . . the use form as fungicides, the compositions according to the invention can also comprise other active ingredients, eg. herbicides, insecticides, growth regulators, fungicides or else fertilizers.

DETD . . . 80% of active ingreddent and 20% of emulsifier in the dry matter. After the spray coating had dried on, the plants were sprayed with a conidia suspension of the fungus Botrytis cinerea and placed into a chamber at 22-24° C. and high atmospheric humidity. After 5 days, the untreated control plants had developed such an extent of the disease that the leaf necroses formed covered most of the leaves (disease level. . .

CLM What is claimed is:

11. A method of controlling harmful fungi, which comprises treating the fungi, their environment, or the materials, plants, seeds, soils, areas or spaces to be protected against fungal infection, with a composition as claimed in claim 1, it.

IT 189001-14-7 189001-15-8 189001-16-9 189001-19-2 189001-21-6 189001-23-8 189001-25-0 189001-27-2

(synergistic agrochem. fungicide)

T 139751-54-5D, mixts. with amides 144167-04-4D, mixts. with amides 145451-07-6D, mixts. with amides 149708-54-3D, mixts. with cytochrome complex III inhibitors 172524-76-4D, mixts. with amides 172719-88-9D, mixts. with amides 188425-85-6D, mixts. with cytochrome complex III inhibitors

(synergistic agrochem. fungicides)

L9 ANSWER 21 OF 22 USPATFULL on STN

ACCESSION NUMBER: 2000:150165 USPATFULL

TITLE: Process and agent for controlling harmful fungi

INVENTOR(S): Eicken, Karl, Wachenheim, Germany, Federal Republic of Ammermann, Eberhard, Heppenheim, Germany, Federal

Republic of Strathmann, Siegfried, Limburgerhof, Germany, Federal

Strathmann, Siegfried, Limburgerhof, Germany, Federa Republic of

Lorenz, Gisela, Hambach, Germany, Federal Republic of Kohle, Harald, Bobenheim, Germany, Federal Republic of Retzlaff, Gunter, Romerberg, Germany, Federal Republic

of
PATENT ASSIGNEE(S): BASF Aktiengesellschaft, Ludwigshafen, Germany, Federal
Republic of (non-U.S. corporation)

NUMBER KIND DATE

PATENT INFORMATION: US 6143745 20001107
WO 9739630 19971030

APPLICATION INFO.:

US 1998-171524 WO 1997-EP2037

NUMBER

19981021 (9) 19970422

19981021 PCT 371 date

19981021 PCT 102(e) date

DATE

PRIORITY INFORMATION: DE 1996-19615976 19960422

DOCUMENT TYPE: Utility

FILE SEGMENT: Granted

PRIMARY EXAMINER: Robinson, Allen J. LEGAL REPRESENTATIVE: Keil & Weinkauf

NUMBER OF CLAIMS: 1.5 EXEMPLARY CLAIM:

LINE COUNT: 759

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

Compositions for controlling harmful fungi, containing in a solid or liquid carrier pyridaben of the formula: ##STR1## or fenpyroximate of the formula: ##STR2## or tebufenpyrad of the formula: ##STR3## and at least one amide compound of the following formula I:

where the substituents have the meanings indicated in the description. and methods for controlling harmful fungi using compositions of this type are described.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

- IT 188425-85-6D, mixts, containing
- (synergistic fungicidal composition)
- RN 188425-85-6 USPATFULL
- CN 3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro[1,1'-biphenyl]-2-yl)- (CA INDEX NAME)

- . invention also relates to a method of controlling harmful SUMM fungi, which comprises treating the fungi, their habitat or the materials, plants, seeds, soils, surfaces or spaces to be protected from fungal attack with a composition according to the invention, it being. . .
- Normally, the plants are sprayed or dusted with the active SUMM compounds or the seeds of the plants are treated with the active compounds.
- SUMM . . . fungi, in particular against Botrytis. In some cases they are systemically active (ie. they can be absorbed by the treated plant without loss of action and, if appropriate, transported in the plant) and can be employed as foliar and soil fungicides.
- SUMM They are of particular importance for the control of a multiplicity of fungi on various crop plants such as wheat, rye, barley, oats, rice, corn, grass, cotton, soybeans, coffee, sugar cane, vines, fruit and decorative plants and vegetable plants such as cucumbers, beans and cucurbits, and on the seeds of these plants

- SUMM The compositions are applied by treating the fungi or the seeds, plants, materials or the soil to be protected from fungal attack with a fungicidally active amount of the active compounds.
- SUMM Application is carried out before or after the infection of the materials, plants or seeds by the fungi.
- SUMM The compositions are especially suitable for controlling the following plant diseases:
- SUMM Fusarium and Verticillium species on various plants,
- SUMM . . . the application form as fungicides, the compositions according to the invention can also contain other active compounds, eg. herbicides, insecticides, growth regulators, fungicides or alternatively fertilizers.
- SUMM strobilurins such as methyl E-methoximino-[a-(o-tolyloxy)-o-tolyl]acetate, methyl E-2-{2-[6-(2-cyanophenoxy)pyrimidin-4-yloxy]phenyl}-3-methoxyacrylate, methyl E-methoximino-[a-(2,5-dimethyloxy)-o-tolyl]acetamide,
- DETD . . 80% of active compound and 20% of emulsifier in the dry matter. After the spray coating had dried on, the plants were sprayed with a conidia suspension of the fungus Botrytis cinerea and placed in a chamber with high atmospheric humidity at 22-24° C. After 5 days, the disease had developed on the untreated control plants so severely that the resulting leaf necroses covered the greater part of the leaves (attack 83%).
- CLM What is claimed is:

  9. A method for controlling harmful fungi, which comprises treating the fungi, their habitat or materials, plants, seeds, soils, surfaces or spaces which are to be protected from fungal attack with a fungicidally effective amount of the.
- IT 96489-71-3D, Pyridaben, mixts. with amides 119168-77-3D, Tebufenpyrad,
   mixts. with amides 119899-14-8D, mixts. containing 149708-54-3D, mixts.
   containing 188425-85-6D, mixts. containing
   (synergistic fungicidal composition)
- L9 ANSWER 22 OF 22 USPATFULL on STN

ACCESSION NUMBER: 1999:160066 USPATFULL

TITLE: Heterocyclically substituted biphenylamine derivatives,

their preparation and their use as fungicides

INVENTOR(S): Eicken, Karl, Wachenheim, Germany, Federal Republic of Rang, Harald, Altrip, Germany, Federal Republic of Harreus, Albreth, Ludwishafen, Germanv, Federal

Republic of

Gotz, Norbert, Worms, Germany, Federal Republic of Ammermann, Eberhard, Heppenheim, Germany, Federal

Republic of Lorenz, Gisela, Hambach, Germany, Federal Republic of Strathmann, Sieofried, Limburgerhof, Germany, Federal

Republic of

PATENT ASSIGNEE(S): BASF Aktiengesellschaft, Ludwigshafen, Germany, Federal Republic of (non-U.S. corporation)

NUMBER KIND DATE

NUMBER DATE

PRIORITY INFORMATION: DE 1995-19531813 19950830

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Fan, Jane

LEGAL REPRESENTATIVE: Keil & Weinkauf

NUMBER OF CLAIMS: 16 EXEMPLARY CLAIM: 1

LINE COUNT: 659

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

BB Biphenylamides of the general formula I ##STRI## and their salts (A= ##STRZ## R.sup.1 =F; R.sup.2 =H, halogen, alkyl, CF.sub.3, alkoxy, alkylthio; R.sup.3 =Cl, CF.sub.3; R.sup.4 =H, CH.sub.3; R.sup.5 =Cl, CH.sub.3, CHF.sub.2, CF.sub.3;

R. $\sup$ .6 =CH. $\sup$ .3, CHF. $\sup$ .2, CF. $\sup$ .3), and compositions comprising I, the preparation of I and of the compositions, and of the use of both of them for controlling harmful fungi.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 188731-21-7P

(preparation of aroyl biphenylylamides as agrochem. and industrial funcicides)

RN 188731-21-7 USPATFULL

CN 3-Pyridinecarboxamide, 2-chloro-N-(4'-chloro-5-fluoro[1,1'-biphenyl]-2-yl)-(CA INDEX NAME)

- SUMM . . . salt is immaterial. Salts which are preferred for the purpose of the invention are those which do not damage the plants, areas, materials or spaces to be kept from harmful fungi and which do not adversely affect the activity of the.
- SUMM Normally, the plants are sprayed or dusted with the active ingredients or the seeds of the plants are treated with the active ingredients.
- DEID They are specially important for controlling a large number of fungi on a variety of crop plants such as wheat, rep. barley, oats, rice, maize, lawn, cotton, soya beans, coffee, sugarcane, grapevines, fruit species, ornamentals and vegetable species such as cucumbers, beans and cucurbits, and on the seeds of these plants.
- DETD The compounds are applied by treating the harmful fungi, their environment, or the plants, spaces, areas or materials to be kept free from them, with an effective amount of the active ingredients.
- DETD Application is effected before or after infection of the materials, plants or seeds by the fungi.
- DETD Specifically, the novel compounds are suitable for controlling the following plant diseases:
- DETD . . . and barley, Pyricularia oryzae on rice, Phytophthora infestans on potatoes and tomatoes, Fusarium and Verticillium species on a variety of plants, Plasmopara viticola on grapevines, Alternaria species on vegetables and fruit.
- DETD . . . fungicides, the compositions according to the invention can also be present together with other active ingredients, eq. with

- herbicides, insecticides, growth regulators, fungicides, or else with fertilizers.
- DETD strobilurins, such as methyl E-methoximino-[\(\alpha\)-(0-tolyloxy)-o-tolyl]acetate, methyl E-2-{2-[6-(2-cyanophenoxy)pyrimidin-4yloxy]phenyl}-3-methoxyacrylate, N-methyl-E-methoximino-[\(\alpha\)-(2,5dimethyloxy)-o-tolyl]acetamide.
- DETD . . . had dried on, the leaves were dusted with oidia (spores) of powdery mildew of wheat (Erysiphe graminis var. tritici). The plants were subsequently incubated for 7 days at 20-22° C. and a relative atmospheric humidity of 75-80%.
- CLM What is claimed is:

  16. A method of controlling harmful fungi, which comprises treating the plants to be kept free from said fungi, with an effective amount of at least one compound of the formula I.
- IT 188731-20-6P 188731-21-7P 188731-22-8P 188731-23-9P 188731-23-9P 188731-24-0P 188731-25-1P 188731-26-2P 188731-27-3P 188731-28-4P 188731-29-5P 188731-30-8P 188731-31-3P 188731-32-0P 188731-33-1P (preparation of aroyl biphenylylamides as agrochem, and industrial funcicides)

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